

HSBC Venture Healthcare Report

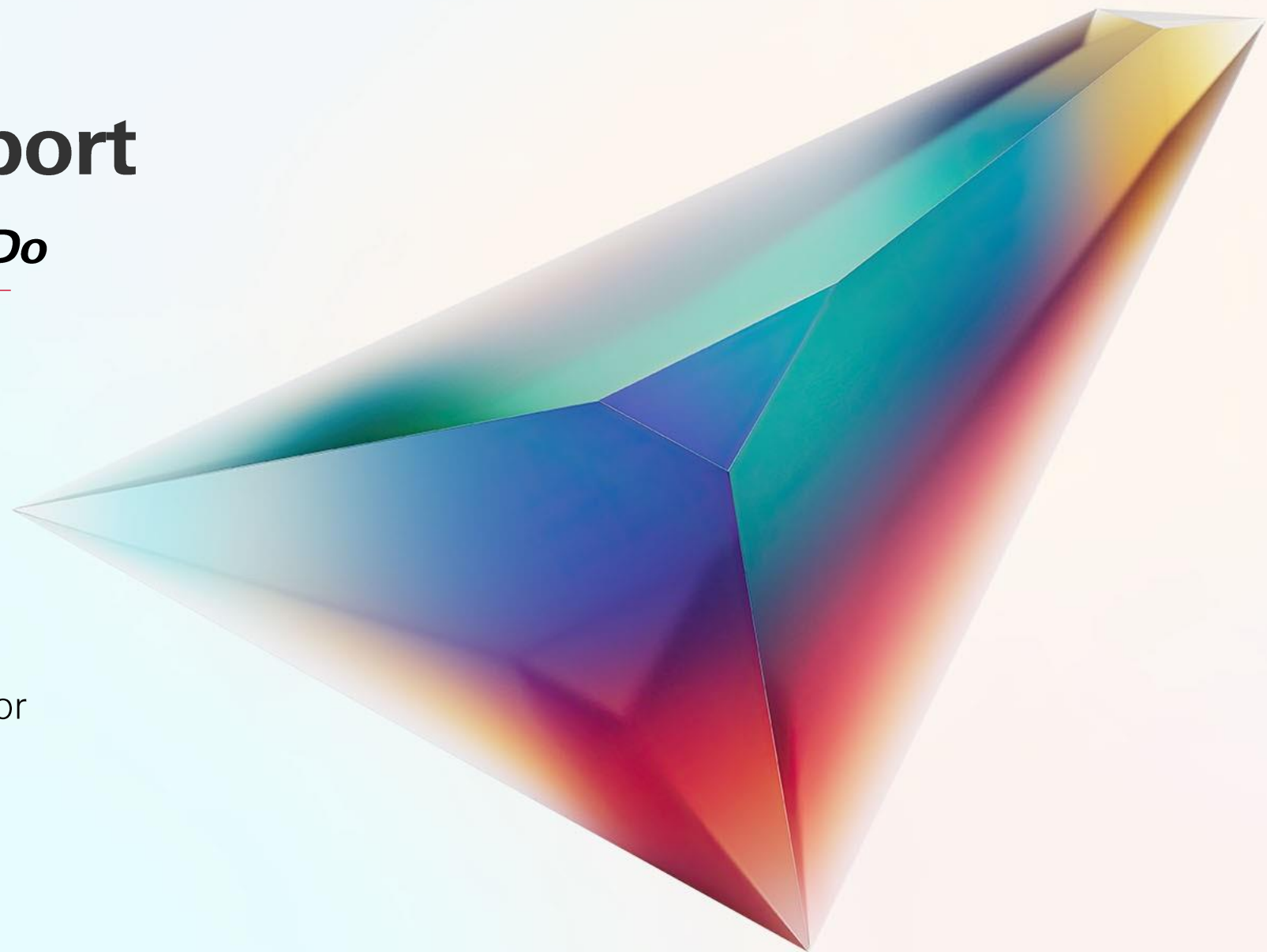
Look What You Made Me Do

HSBC Innovation Banking Analysis
Annual Report 2024

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January 8, 2025

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Lead Author

Jonathan Norris joined HSBC's Innovation Banking Division in April 2023. He manages healthcare venture relationships and works with investors and companies on commercial banking and debt products.

In addition, for more than a decade, Jonathan has written comprehensive reports on the venture healthcare ecosystem, covering venture fundraising, investment, valuations, and exits. These reports have been widely cited in the ecosystem, and he often speaks at major investor and industry conferences. He has more than 25 years of healthcare banking experience.

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HSBC Venture Healthcare Report



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HSBC Venture Healthcare Report: 2024 Recap

GENERAL OVERVIEW

After record investment and aggressive valuations from 2020 to mid-2022, public market struggles led venture firms to prioritize portfolio triage throughout 2023. By 2024, new deal activity resumed, but with a clear shift and investor focus. The challenges of securing follow-on financing, particularly Series B rounds, has dampened early-stage activity, resulting in fewer Seed and Series A deals. Investors have instead leaned towards larger syndications raising large early-stage rounds (including \$100M+ mega rounds) or have shifted their focus to later-stage, de-risked opportunities. Meanwhile, many companies that raised add-on or inside rounds¹ are now “on the clock”, facing pressure to secure new investor-led financing or risk consolidation or shutdown.



Biopharma

- **First-financing surge:** First-financing dollars more than doubled 2023, despite fewer deals. Twenty \$100M first-financing mega rounds in 2024 raised more than 2023's total first-financing investment and totaled 64% of all first financing dollars in 2024.
- **Venture-created deals dominate:** Many first-financings were venture-created, focusing on teams with blank checks following big exits and deals in-licensing China assets.
- **Sector highlights:** Overall, investment rose 33%, driven by oncology and platform companies alongside significant growth in autoimmune, metabolic, and dermatology mega financings.
- **Crossover investors drive mega rounds:** Many of the 106 \$100M+ mega rounds in 2024 featured crossover investors at cycle-high valuations, positioning for large M&A or IPO activity.
- **M&A and IPO activity:** M&A saw a sharp increase, with 11 of 17 deals exceeding \$1B in total deal value. Eighteen IPOs were recorded, particularly active in Q1 and Q3, focusing on Phase I and Phase II assets. IPO performance was mixed, with the median post-IPO activity down 33%.



Med Device

- **First-financing struggles:** First-financing investment declined due to investors' concerns about finding Series B leads and an expanding private M&A exit timeline.
- **Sector-specific growth:** Neurology and NIM saw investment comebacks, while uro/gyn companies continued to attract increased funding.
- **Series B and insider activity:** Series B financings grew, with many achieving up rounds,² but inside round extensions in Series A also spiked.
- **Top deals dominate dollars:** The top 10% of deals captured 60% of all med device investment dollars, the highest dollar percentage across healthcare sectors, driven by large financings for commercial scale-ups and pivotal trials. Neuro, NIM and orthopedic indications led overall funding.
- **Cardiovascular and exits:** Cardiovascular led private M&A activity with five deals. While overall deal values declined from 2023, they remain higher than in previous years. Ceribell completed the sector's sole IPO, achieving a step-up valuation and strong aftermarket performance.



Healthtech

- **Early-stage decline, AI momentum:** Early-stage investment decreased compared to 2023 levels but maintained strong momentum in Artificial Intelligence (AI) applications, particularly within the clinical workflow subsector.
- **Investment normalization:** Healthtech investment dollars overall grew from 2023 levels, stabilizing at pre-banking crisis levels. However, Q4 saw a decline in activity as Investors awaited clarity on potential 2025 IPOs.
- **Focus on underserved groups:** Investment continued in companies targeting specialized care in underserved populations, including women's health, mental health, and senior care.
- **Valuation resets:** A high number of undisclosed rounds suggests valuation reset or insider-round extensions for many companies.
- **IPO anticipation:** A quiet IPO market kept high growth companies on hold, with several notable companies filing S-1's confidentially or waiting to test the market in 1H 2025.



Dx/Tools

- **First-financing slowdown:** First-financing activity dropped to a four-year low, driven by financing risk and a challenging exit environment.
- **Corporate investment rises:** With traditional VCs retreating, corporate investors stepped up, funding major deals focused on radiopharma, computational bio, and oncology-focused liquid biopsy.
- **Top-heavy investment:** Overall investment increased but remained concentrated, with the top 10% of deals capturing 48% of all dollars. Larger deals predominantly went to commercial-stage revenue-ramping companies, particularly those with \$100M+ revenues, at high valuations. Insider-round extensions highlighted the growing gap between haves and have-nots.
- **M&A and IPO activity:** M&A activity slowed as acquirers prioritized companies with revenue growth and near-term profitability. The sole 2024 IPO, Tempus, debuted with a \$5B public evaluation, nearly 50% below its 2022 private post-money valuation.

Data from PitchBook as of 12/15/24. ¹Inside rounds defined as equity/convertible financings where only insiders participate, typically at smaller amounts. ²Up round calculated using Pitchbook valuation data: Divide new pre-money valuation by previous round post-money valuation – if greater than one, deal is labeled as an up round. Data sources: PitchBook, company websites, internal analysis.

Venture Healthcare Overview

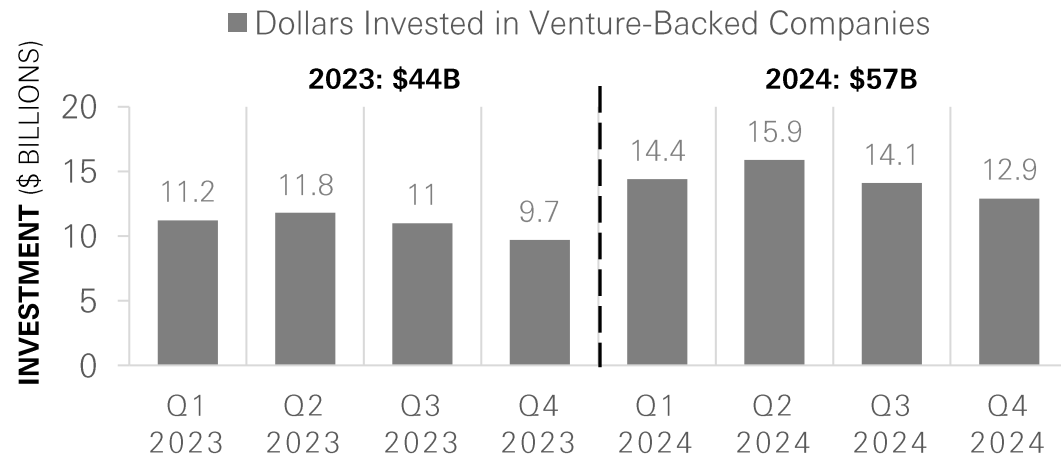
Annual 2024

Venture Capital ("VC") Investment in Healthcare

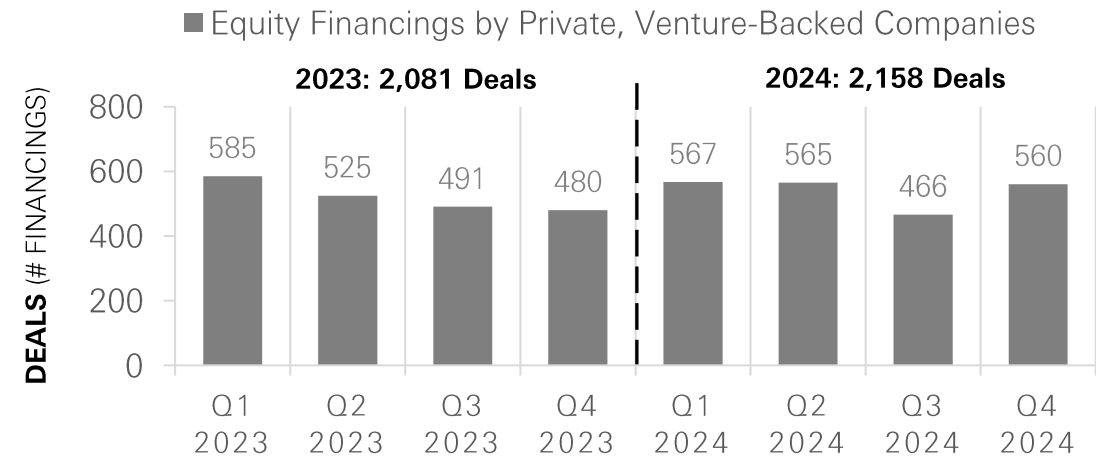
2023–2024 US & Europe

Investment in VC-backed healthcare companies rose in 2024; deals remained stable

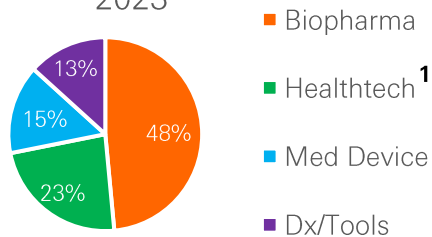
VENTURE HEALTHCARE DOLLARS



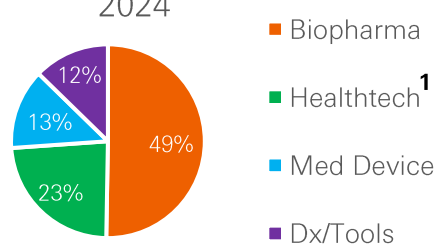
VENTURE HEALTHCARE DEALS



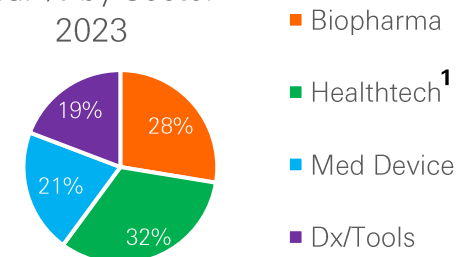
Investment % by Sector
2023



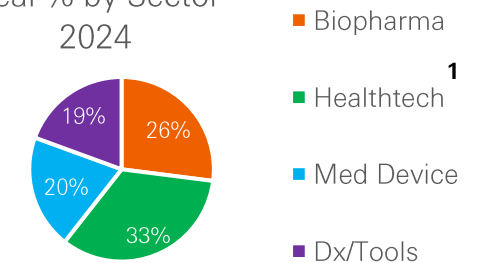
Investment % by Sector
2024



Deal % by Sector
2023



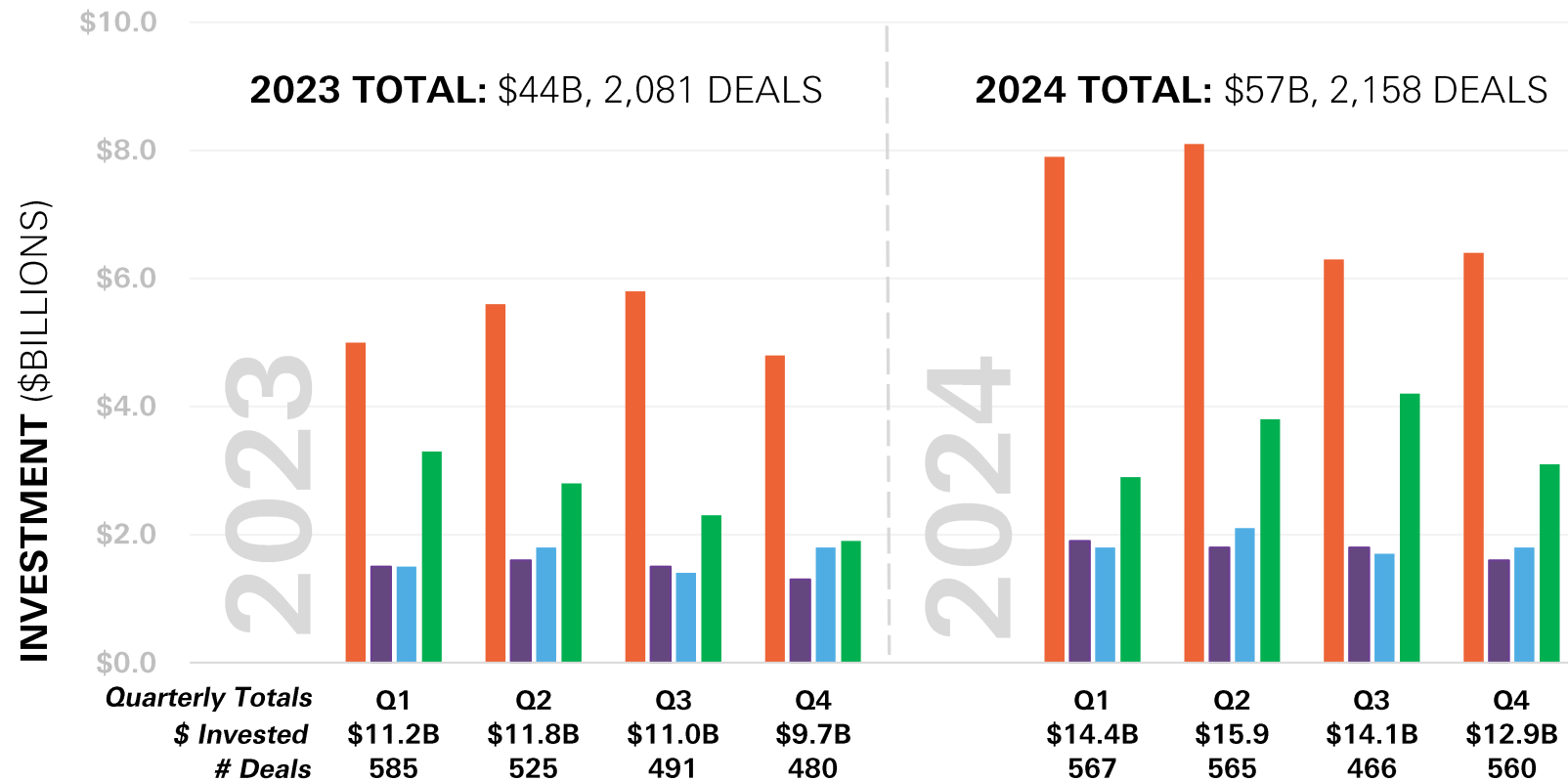
Deal % by Sector
2024



Data from PitchBook as of 12/15/24, with 12/16-12/30 estimated based on best-efforts basis. ¹Healthtech deals that overlap with other healthcare sectors are not counted in the healthtech totals in this slide – including overlap, healthtech investment was \$12.6B in 2023 and \$14.8B in 2024. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Venture Capital Investment by Healthcare Sector 2023–2024 US & Europe

Investment increased in 2024, led by mega rounds and large syndicates



| | | | | |
|---------------------------------|------|------|------|------|
| 2024 TOTAL | 2023 | 2022 | 2021 | 2020 |
| VS. PREVIOUS YEARS ² | +30% | -12% | -42% | -2% |

Investors return, funding larger deals

While inside rounds³ prevailed in 2023, 2024 marked a 30% rebound in new investments. Biopharma led the way, accounting for 49% of healthcare venture funding, continuing an increase each year from 2021 (39%). Inside rounds declined in 2H 2024 across all sectors, as most companies either secured new investor-led funding or extended existing inside rounds. We anticipate a critical juncture for inside rounds within the next six to nine months.

In 2024 investors favored larger financings involving multiple co-investors, reflecting a “safety-in-numbers” approach. Many of these financings combined two rounds into one, aiming to reduce financing risk. The top 10% of deals (216 deals) accounted for \$30.2B in investment, 53% of all venture healthcare dollars.

Investor pressure to conserve dry powder

The increase in investment comes as investors face pressure from LPs⁴ to demonstrate returns before raising their next fund. Distributions from exits has been challenging over recent years, casting uncertainty on the timing of future fundraising. Following the surge of inside rounds in 2023, investors are now tasked with balancing new investments and support of existing portfolios, prioritizing dry powder on their high-potential companies. In 1H 2025, companies reliant on inside rounds will find new lead investors or face consolidation or shutdown.

Data from PitchBook as of 12/15/24, with 12/16-12/30 estimated based on best-efforts basis. ¹Healthtech deals that overlap with other healthcare sectors are not counted in the healthtech totals in this slide – including overlap, healthtech investment was \$12.6B in 2023 and \$14.8B in 2024. ²Using specific PitchBook search functions to approximate sector-specific funding from previous years. ³Inside rounds defined as equity/convertible financings where only insiders participate, typically at smaller amounts. ⁴“LPs” stand for “Limited Partners,” the underlying funders of venture funds. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Biopharma Early Stage: First-Financing Analysis (Seed/Series A)

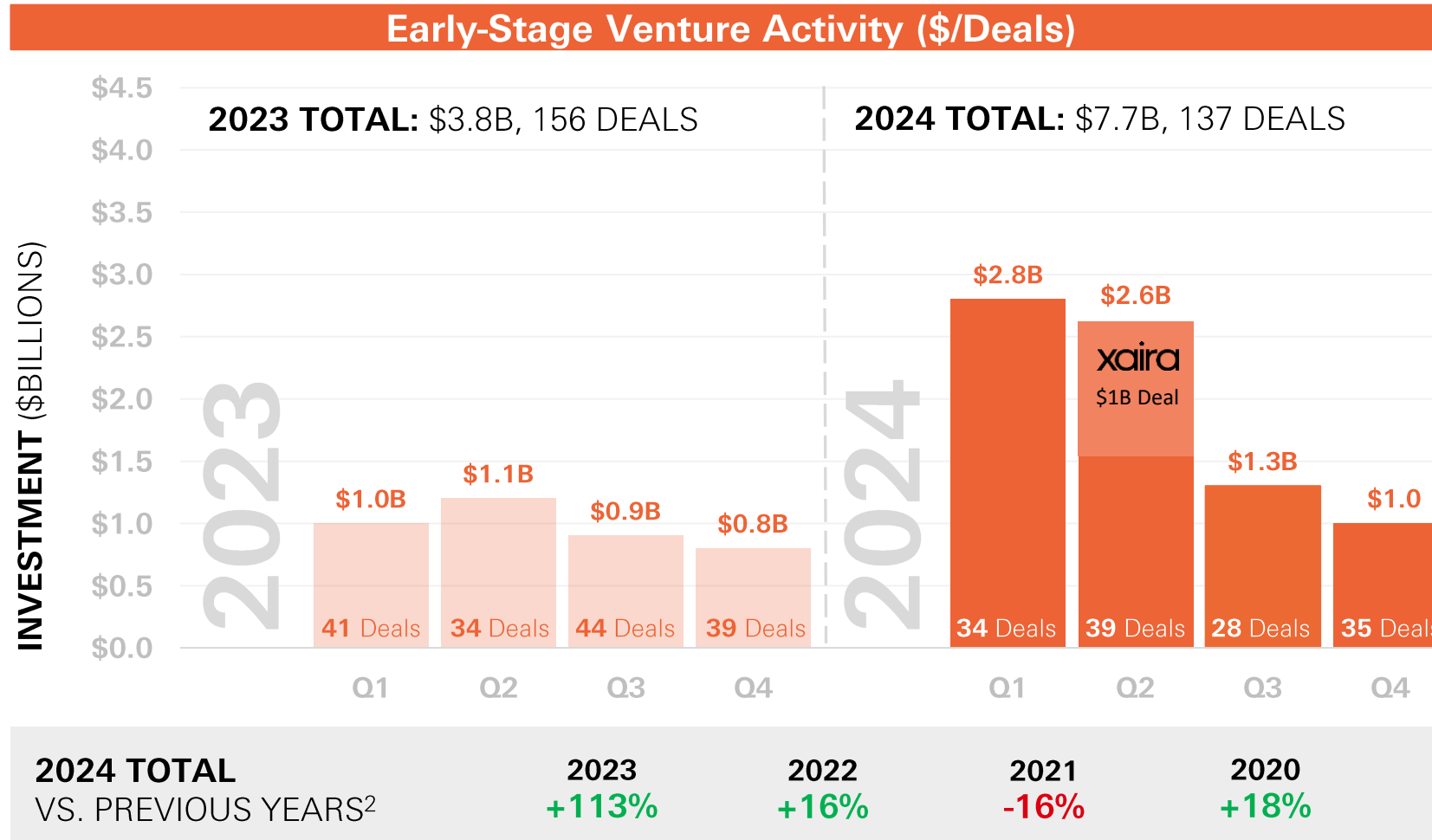
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Biopharma First-Financing¹ Analysis

2023–2024 US & Europe



Mega deals drove a surge in first-financing dollars



1H Investment soared, led by mega deals

First-financing in biopharma soared in 1H, outpacing full-year 2023 investment. Mega deals made a strong comeback, with fourteen \$100M+ deals including seven over \$300M. These deals raised \$4.2B in total, representing 72% of all 1H first-financing dollars. The deals spanned all stages of development, with six preclinical, four phase I, two phase II, and two phase III deals.

In 2H, only six \$100M+ first-financing rounds occurred. However, there were five additional \$100M+ Series A deals (\$650M in total funding) that had previously completed large Seed first-financing rounds in previous years. Thus, the large Series A trend did continue in 2H, but these Series A deals just did not meet our first-financing definition.

The median number of investors in first-financing mega deals was seven, comprising a mix of VC, crossover, and some corporate support. Syndicate sizes were notably larger compared to previous cycles, where first-financings typically involved two to three investors. However, the high number of VCs in the same deal raised concern about portfolio diversification and potential impacts of LP re-up commitments, especially as LPs appear to be narrowing their new allocations to VC funds.

Where first-financing deals are flowing

Most mega deals were venture created, though this took varying forms. Some involved teams fresh off successful M&A with a blank check, while others were spinoffs from big pharma. Additionally, both early and later-stage deals with China-based assets stood out. These assets followed two distinct tracks: either differentiated early-stage technology or less differentiated later-stage technology with the potential to be first-in-class; both driving significant funding and a race to data. Multiyear science-based venture builds have become less common, though a core group of ten to fifteen firms still pursue this approach to company creation.

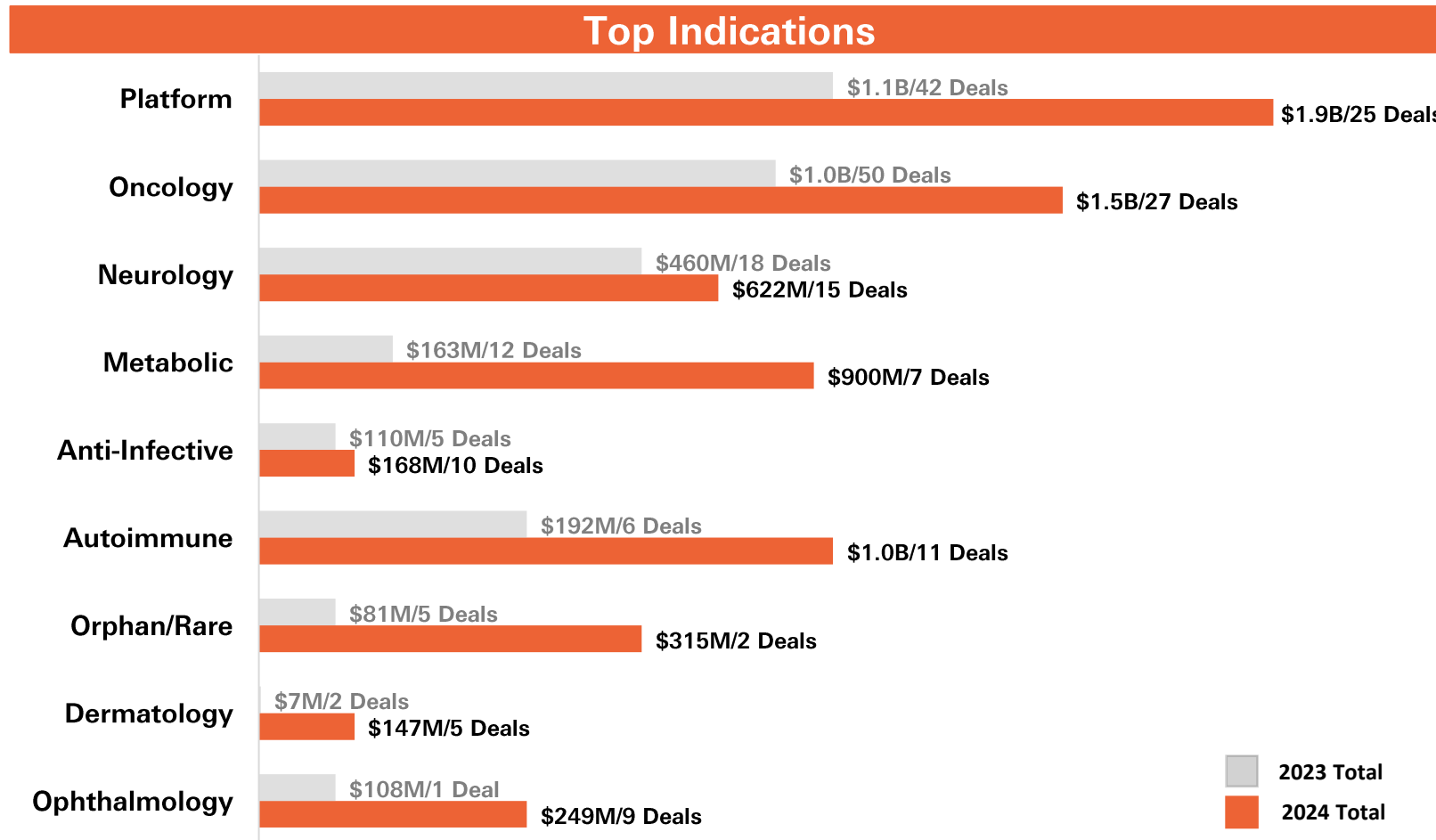
Data from PitchBook as of 12/15/24, with 12/16-12/30 estimated based on best efforts basis. Covers private, venture-backed investment. ¹First-financing defined as initial Seed or Series A financing of \$2M+. ²Using specific PitchBook search functions to approximate sector specific funding from previous years. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Biopharma First-Financing¹ by Indication²

2023–2024 US & Europe



Large investment bets drove metabolic and autoimmune activity



Seed deals decline amid surge in larger financings

Large deals continued to dominate biopharma first-financings, with most indications raising more capital through fewer deals. Seed deals dropped significantly, from 57 in 2023 to 30 in 2024.

Preclinical and phase I continued to dominate first-financing

In 2024, 74% of all first-financings were preclinical (74 deals) or phase I (16), continuing the trend from 2023 (77%). Unlike earlier cycles in 2021 to 2022, most first-financing assets are now 12 to 15 months from IND, rather than several years. Platform deals,² defined as too early to define a lead asset, accounted for the most preclinical financings (21 of 25 deals), followed by oncology (20 of 27 deals), neuro (10 of 15 deals), and autoimmune (seven of 11 deals).

Autoimmune, metabolic close multiple mega rounds

Every leading indication raised more first-financing dollars than in 2023. Metabolic and autoimmune emerged as breakout indications driven by significant growth through mega deals. The average deal size reached \$130M for metabolic and \$91M for autoimmune.

Platform, oncology yield more dollars, fewer deals

Platform and oncology investments significantly passed 2023 levels, despite nearly a 50% decline in deals. Orphan/rare activity remained limited, with GondolaBio securing \$300M of the \$315M total.


Data from PitchBook through 12/15/24. Covers private, venture-backed investment. ¹First-financing defined as initial Seed or Series A financing of \$2M+. ²Indication defined as lead asset focus area or focus delineated in the company's website. If preclinical with multiple areas of potential focus, it is defined as Platform. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Biopharma First-Financing¹ Largest Financings

2024 US & Europe



Preclinical and phase I dominated large deals; NorCal led big deal activity

| | | Indication Stage | Size of Round (\$M) | Deal Date | Location | | | Indication Stage | Size of Round (\$M) | Deal Date | Location |
|----|---|------------------------|---------------------|-----------|-----------------|----|---|---------------------------|---------------------|-----------|-------------------|
| 1 |  | Platform Preclinical | 1,000 | 4/24 | SF, CA | 11 |  | Oncology Preclinical | 150 | 3/20 | Rockville, MD |
| 2 |  2 | Respiratory Phase III | 425 | 2/13 | Chapel Hill, NC | 12 |  | Ophthalmology Preclinical | 150 | 1/26 | Redwood City, CA |
| 3 |  | Autoimmune Preclinical | 400 | 3/21 | San Diego, CA | 13 |  | Neuro Phase I | 141 | 9/17 | SSF, CA |
| 4 |  | Metabolic Phase III | 400 | 10/1 | Waltham, MA | 14 |  | Platform Preclinical | 128 | 4/3 | Cambridge, MA |
| 5 |  | Oncology Phase I | 385 | 4/26 | San Diego, CA | 15 |  | Renal Phase I | 105 | 1/30 | Skokie, IL |
| 6 |  | Autoimmune Phase I | 370 | 9/9 | San Diego, CA | 16 |  | Neuro Preclinical | 101 | 11/12 | SF, CA |
| 7 |  | Metabolic Phase I | 350 | 4/3 | New York, NY | 17 |  | Neuro Phase III | 100 | 1/5 | San Jose, CA |
| 8 |  | Respiratory Phase II | 300 | 1/19 | Malvern, PA | 18 |  | Autoimmune Phase I | 100 | 8/27 | Scotch Plains, NJ |
| 9 |  | Orphan/Rare Phase I | 300 | 8/16 | Palo Alto, CA | 19 |  | Derm Preclinical | 100 | 2/12 | Boston, MA |
| 10 |  | Oncology Phase I | 200 | 5/2 | Palo Alto, CA | 20 |  | Platform Preclinical | 94 | 3/24 | SSF, CA |

Numbers at a glance (20 largest first-financing deals)

The top 20 deals raised \$5.6B, accounting for 69% of all biopharma dollars.

The top 20 median deal size in 2024 reached \$250M, 3x 2023's median of \$80M.

Stage

Phase I: 8 deals
Preclinical: 8 deals
Phase III: 3 deals

Indication

Oncology: 3 deals
Neuro: 3 deals
Platform: 3 deals
Autoimmune: 3 deals

Location

NorCal: 8 deals
MA: 3 deals
SoCal: 3 deals

Lookback: 2022 first-financing deals highlight momentum and exits

The seven largest biopharma first-financings of 2022 have shown strong progress. Zenas, ArriVent, and Upstream Bio raised mezzanine rounds before going public. IDRx and Affini T raised significant Series B step-up rounds (both at 1.4x). The remaining two deals obtained new or add-on financing.

Data from PitchBook through 12/15/24. Covers private, venture-backed investment. ¹First-financing defined as initial Seed or Series A financing of \$2M+. ²Originally announced in previous years. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Biopharma Valuation¹ Analysis

2023–2024 US & Europe



Neuro seeds and larger oncology plays showcased strong pre-money values

| Stage | Deals with Valuations ¹ versus Total Activity | Median Round Size | Pre-Money Valuation (by Percentile) in 2024 | |
|-----------------|---|-------------------------------|--|--------------|
| Angel / Seed | 13 of 29 | \$8M \$8M (2023) | 25th Pct | \$7M |
| | | | 50th Pct | \$9M |
| | | | 75th Pct | \$16M |
| Series A <\$50M | 43 of 86 | \$12M \$10M (2023) | 25th Pct | \$19M |
| | | | 50th Pct | \$31M |
| | | | 75th Pct | \$45M |
| Series A >\$50M | 29 of 58 | \$100M \$85M (2023) | 25th Pct | \$38M |
| | | | 50th Pct | \$55M |
| | | | 75th Pct | \$93M |

Neuro seed deals score highest pre-money values

In seed deals, three of the top six highest pre-money valuations were neuro companies, including two focused on Alzheimer's (one an Ultragenyx spin-off) and one targeting opioid addiction. The largest seed round was \$100M for Alys, a preclinical dermatology company with a \$50M pre-money valuation.

Series A top pre-money deals highlight preclinical

Pre-money valuations for Series A deals remained strong in 2024, with preclinical companies securing 12 of the 19 highest pre-money valuations.

In smaller Series A deals that raised less than \$50M, six deals surpassed \$50M in pre-money valuation, led by oncology company Convergent (Phase II), followed by Pinetree and Siren (both preclinical).

Gene and cell therapy accounted for five Series A deals with a median raise of \$28M and pre-money valuation of \$22M.

Larger Series A deals of \$50M+ had a median pre-money valuation of \$55M and an average of \$141M, driven by Xaira (\$1.7B), Areteia (\$418M), and Seaport (\$250M).

Data from PitchBook as of 12/15/24. Covers private, venture-backed investment. ¹Valuation refers to companies that had valuation information per PitchBook. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.



Biopharma Investment: All Venture Deals

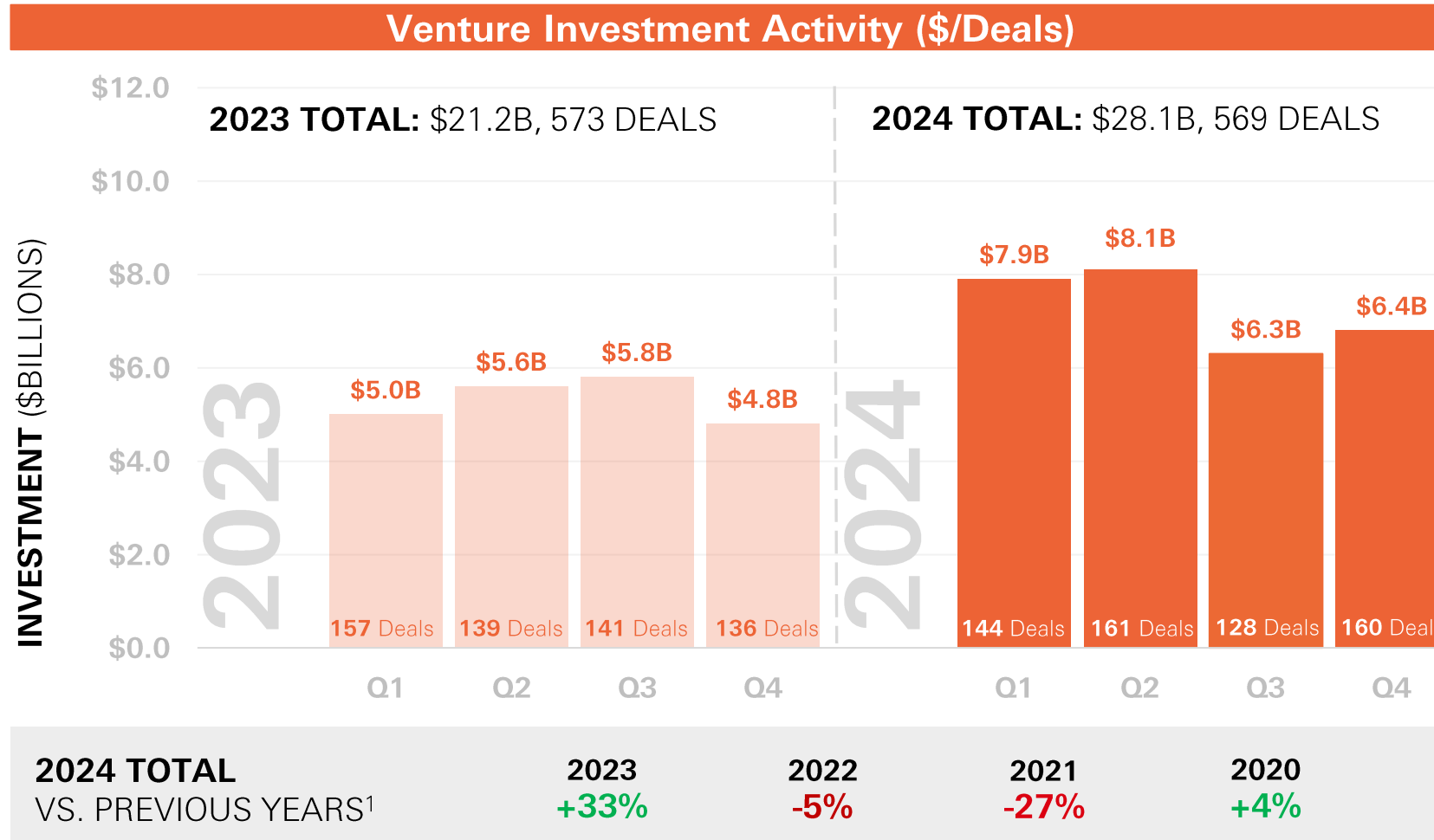
Annual 2024

Biopharma Analysis (All Deals)

2023–2024 US & Europe



Mega deals fueled increased dollars; Future-round risk remains for inside rounds



Investment dollars up significantly

Biopharma investment dollars increased by 33% in 2024, with all quarters surpassing the best investment quarter in 2023.

Private mega rounds exceeding \$100M grew by 70% to 106, 57 of which (54%) included new crossover investors, signaling optimism for a robust IPO window in 2025–2026.

Could mega rounds make companies too big to fail?

The largest syndicated deals often feature experienced management teams with a track record of success that demand substantial equity rounds. This allows flexibility to pivot if the initial technology fails, with continued insider support. In such cases, investors are more likely to provide additional funding rather than accept a write-off.

Big valuations cause for worry?

Raising large rounds is logical for complex technologies or costly clinical trials. However, a notable caution in 2024's surge in mega deals lies in the significantly higher median crossover deal size (\$135M) and post-money valuations (\$370M) compared to prior up-cycle years: 2020 (\$87M deal size, post of \$236M), 2021 (\$100M, post of \$280M) and 2022 (\$110M, post of \$260M)². Despite a robust private M&A market, challenges remain with a tougher IPO landscape and mixed public market performance.

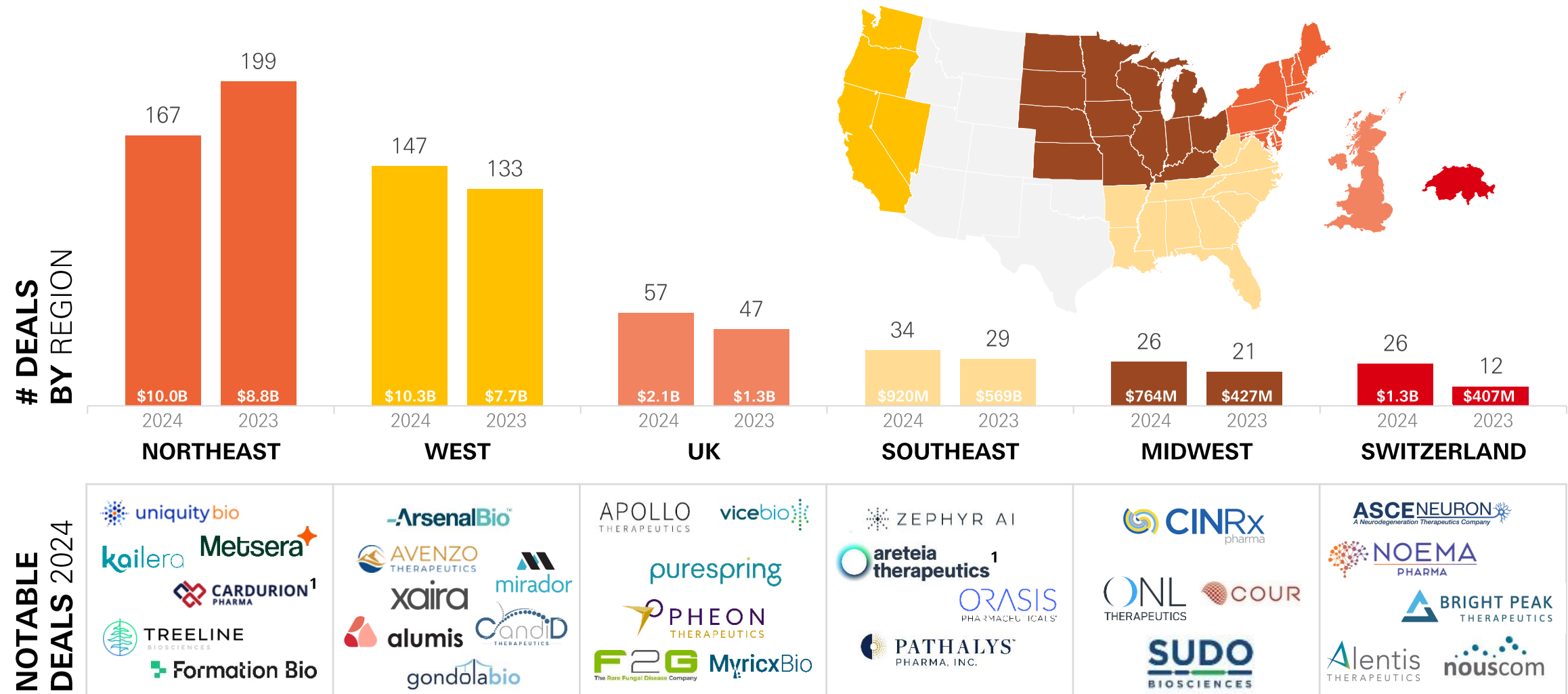
Data from PitchBook as of 12/15/24, with 12/16–12/30 estimated based on best efforts basis. Covers private, venture-backed investment. ¹Using specific PitchBook search functions to approximate sector specific funding from previous years. ²Used PitchBook and internal analysis to determine which deals were crossover rounds and to calculate median numbers. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Biopharma Deal Activity By Region

2023–2024 US & Europe



West closed more investment dollars in 2024, but Northeast led deal activity



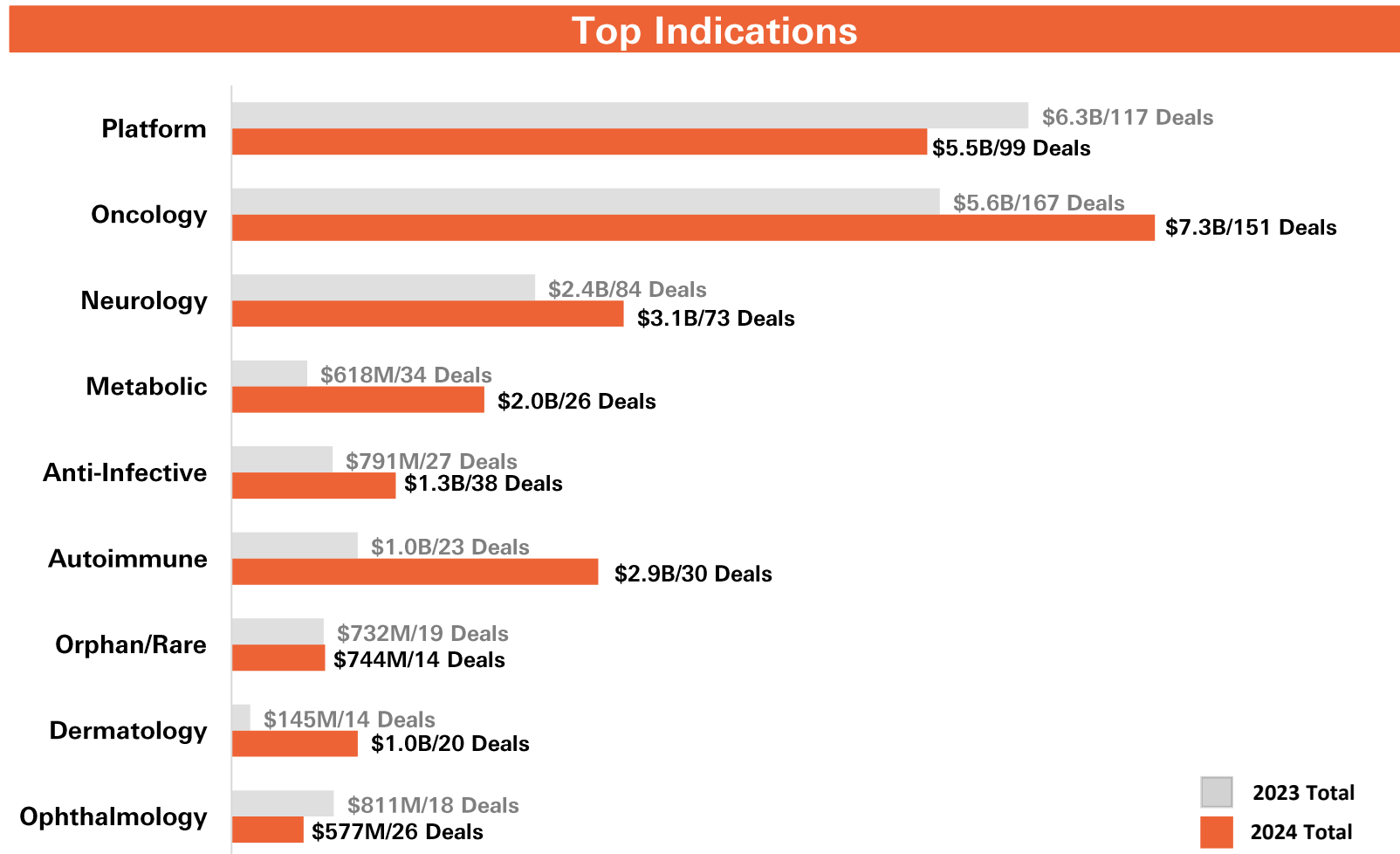
Data from PitchBook through 12/15/24. Covers private, venture-backed investment. ¹Originally announced in prior years. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Biopharma Investment by Indication¹

2023–2024 US & Europe



Oncology, Autoimmune, Metabolic and Dermatology saw outsized investment



Seven of the top nine biopharma indications saw increased investment compared to 2023.

Oncology supplants Platform

Oncology investment surpassed platform by almost \$2B in 2024, marking the first time since 2021 that platform was not the top investment modality. This shift does not indicate a decline in preclinical investment, but rather reflects assets moving closer to the clinic, with many already identifying a lead candidate in a specific indication. Notably, 58% of oncology financings in 2024 were preclinical.

Autoimmune and Metabolic saw a significant shift in investment

Both indications saw significant investment growth, with Autoimmune up ~3x and Metabolic up ~3.5x.

50% of autoimmune deals were preclinical, though the largest autoimmune span all stages, including preclinical (Mirador, Capstan), phase I (Candid), phase II (Alumis, AltuBio) and phase III (Zenas). Similarly, half of metabolic deals were preclinical, but the larger investments targeted later-stage assets in obesity and aging, including phase II (Metsera, BioAge) and phase III (Kailera). With the rapid rise in obesity related investments in recent years, there is growing concern about whether this area may now be overfunded.

Neuro remains stable, later-stage; derm rises

There were 30 preclinical neuro deals in 2024, with 26 deals phase II or later. The largest were phase II (Seaport, Noema, Engrail) and phase III (Cerevance).

Dermatology investment increased 7x, led by four \$100M+ deals: Formation, Enveda, Evommune and Alys.

Data from PitchBook through 12/15/24. Covers private, venture-backed investment. ¹Indication defined as lead asset focus area or focus delineated in the company's website. If preclinical with multiple areas of potential focus, it is defined as Platform. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Biopharma Largest Financings (All Deals)

2024 US & Europe



First-financing deals drove biggest deals; Autoimmune indication led financings

| | | Indication Stage | Size of Round/ (\$M) Step-up? ¹ | Date/ Round | Location | | | Indication Stage | Size of Round/ (\$M) Step-up? ¹ | Date/ Round | Location |
|----|-----------------------------------|------------------------|--|-------------|-----------------|----|--|-------------------------|--|-------------|----------------|
| 1 | xaira | Platform Preclinical | 1,000 | 4/24 A | SF, CA | 11 | gondolabio | Orphan/Rare Phase I | 300 | 8/16 JV | Palo Alto, CA |
| 2 | areteia therapeutics ² | Respiratory Phase III | 425 | 2/13 A1 | Chapel Hill, NC | 12 | uniqueness bio | Respiratory Phase II | 300 | 1/19 A | Malvern, PA |
| 3 | TREELINE BIOSCIENCES | Oncology Preclinical | 422 | 10/17 B | Watertown, MA | 13 | APOLLO THERAPEUTICS | Platform Preclinical | 260 | 1/2 C | Cambridge, UK |
| 4 | kailera | Metabolic Phase III | 400 | 10/1 A | Waltham, MA | 14 | CARDURION PHARMA ² | Cardiovascular Phase II | 260 | 7/10 B | Burlington, MA |
| 5 | mirador THERAPEUTICS | Autoimmune Preclinical | 400 | 3/21 A | San Diego, CA | 15 | alumis | Autoimmune Phase II | 259 | 3/6 C | SSF, CA |
| 6 | AVENZO THERAPEUTICS | Oncology Phase I | 385 | 4/2 A | San Diego, CA | 16 | SEAPORT THERAPEUTICS | Neuro Phase II | 226 | 10/31 B | Boston, MA |
| 7 | Formation Bio | Dermatology Phase III | 372 | 6/26 D | New York, NY | 17 | ALTRUBIO | Autoimmune Phase II | 225 | 5/21 B | SF, CA |
| 8 | Candid THERAPEUTICS | Autoimmune Phase I | 370 | 9/9 B | San Diego, CA | 18 | Metsera ² | Metabolic Phase II | 215 | 11/13 B | New York, NY |
| 9 | Metsera ² | Metabolic Phase I | 350 | 4/3 A | New York, NY | 19 | Zenas BioPharma | Autoimmune Phase III | 200 | 5/7 C | Waltham, MA |
| 10 | ArsenalBio™ | Oncology Phase I | 325 | 9/4 C | SSF, CA | 20 | BBOT <small>Intelligent Oncology Therapeutics</small> | Oncology Phase I | 200 | 5/2 A | Palo Alto, CA |

The top 20 deals accounted for only 3% of all deals but represented 24% of biopharma venture dollars, continuing the trend from 2023 when the largest 20 deals comprised 23% of investment dollars.

More mega Series A deals

In 2024, nine of the top 20 deals were Series A or joint-venture first-financings, compared to only three Series A in 2023.

Autoimmune and Metabolic interest explodes

In 2023, none of the top 20 largest deals targeted autoimmune or metabolic indications. However, in 2024, nine of the largest 20 deals were focused on these two areas.

Numbers at a glance (largest 20 deals)

Stage

| | |
|--------------|---------|
| Phase II: | 6 deals |
| Phase I: | 6 deals |
| Preclinical: | 4 deals |
| Phase III: | 4 deals |

Indication

| | |
|--------------|---------|
| Autoimmune: | 5 deals |
| Oncology: | 4 deals |
| Metabolic: | 3 deals |
| Respiratory: | 2 deals |

Location

| | |
|-------------|---------|
| NorCal: | 6 deals |
| MA: | 5 deals |
| SoCal & NY: | 3 deals |

Valuation¹

Step-Up

Flat Rd

Step-Down

Data from PitchBook through 12/15/24. Covers private, venture-backed investment. ¹Step-up analysis uses PB supplied valuations if available. ²Originally announced in prior years. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.





























Biopharma Most Active Investors¹

2024 US & Europe



VC activity up, corporate stable, and new growth names joined active investors

ALL DEALS

| VC ³ | | Corporate ³ | | Growth ² | |
|-----------------|---|------------------------|---|---------------------|---|
| 17 |  | 14 |  | 23 |  |
| 12 |  | 12 |  | 11 |   |
| 11 |   | 11 |  | 10 |  |
| 9 |  | 10 |  | 9 |   |
| 8 |  | 9 |  | 8 |   |
| 7 |       | 8 |  | 7 |   |

Data from PitchBook as of 12/15/24. Covers private, venture-backed investment. ¹Most Active Investors only include first investment into a new portfolio company, not follow-on financings. ²Growth Investors defined as investment firms that typically invest in later-stage companies that either are revenue scaling, or the round is anticipated to be the last before an IPO. ³Note that families of funds are combined for this slide, as are corporate and corporate venture with the same parent. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Biopharma Valuation¹ Analysis

2023–2024 US & Europe



2024 saw fewer Series B step-ups and more valuation resets in later rounds

| Stage | Deals with Valuations ¹ versus Total Activity | Median Round Size | Up Round ² Percentage | Pre-Money Valuation (by Percentile) in 2024 | |
|---------------------|---|-------------------------|------------------------------------|--|--------|
| Series B <\$50M | 15 of 32 | \$10M \$25M (2023) | 53% (8/15) 52% (13/25 in 2023) | 25th Pct | \$31M |
| | | | | 50th Pct | \$56M |
| | | | | 75th Pct | \$105M |
| Series B >\$50M | 25 of 60 | \$112M \$115M (2023) | 56% (14/25) 93% (24/26 in 2023) | 25th Pct | \$112M |
| | | | | 50th Pct | \$195M |
| | | | | 75th Pct | \$243M |
| Series C <\$100M | 12 of 22 | \$50M \$43M (2023) | 58% (7/12) 40% (4/10 in 2023) | 25th Pct | \$98M |
| | | | | 50th Pct | \$165M |
| | | | | 75th Pct | \$196M |
| Series C >\$100M | 13 of 18 | \$133M \$175M (2023) | 54% (7/13) 63% (5/8 in 2023) | 25th Pct | \$213M |
| | | | | 50th Pct | \$330M |
| | | | | 75th Pct | \$530M |
| Series D+ | 13 of 25 | \$107M \$47M (2023) | 15% (2/13) 67% (5/8 in 2023) | 25th Pct | \$71M |
| | | | | 50th Pct | \$215M |
| | | | | 75th Pct | \$445M |

Fewer Series B up rounds

While Series B valuations remain strong, the number of up rounds faltered from 2023, with step-up deals dropping from 37 to 22 and the percentage falling from 77% to 55%.

Large Series C pre-money values led by Crossovers

Ten of the top 15 Series C pre-money values (all exceeding \$200M) included new crossover investors. Notably, only six of these deals involved phase II or later assets. This earlier-stage crossover support likely positions these companies for IPOs in late 2025-2026, aligning with the current trend of phase II or later assets for public offerings.

Series D reset values in wake of tough IPOs

Many down rounds were observed among companies that last raised rounds in 2021-2022. Eight of 13 down round deals were phase II or later. The only later-stage step-ups were phase III Formative Bio and phase II Osteal Therapeutics.

Data from PitchBook as of 12/15/24. Covers private, venture-backed investment. ¹Valuation refers to companies that had valuation information per PitchBook. ²Up round refer to companies that had valuation information available for both the new and last financing, with the new round pre-money greater than the last round post-money. Up round calculated using Pitchbook valuation data: Divide new pre-money valuation by previous round post-money valuation – if greater than one, deal is labeled as an up round. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Biopharma Largest Post-Money Values¹

2024 US & Europe



Later-stage replaced preclinical as most valued, with crossover, corporate support

LARGEST POST-MONEY VALUATIONS BY BIOPHARMA INDICATION

| Indication | Company | Date | Deal Size (\$M) | Round | Post \$ (\$M)/ Step-up? ³ | Stage | Notable/Lead New Investor(s) |
|-------------|-----------------------------------|------|-----------------|-------|---|-----------------|---------------------------------|
| Platform | xaira | 4/24 | 1,000 | A | 2,700 | Preclinical | VC |
| Oncology | ArsenalBio | 9/4 | 325 | C | 1,850 | Phase I | Corporate, VC, Xover |
| Dermatology | Formation Bio | 6/26 | 372 | D | 1,700 | Phase III | Corporate, VC |
| Agbio | INARI | 1/30 | 103 | F | 1,650 | Clinical Trials | LP, VC |
| Platform | Mammoth Biosciences | 4/22 | 106 | D1 | 1,390 | Preclinical | Corporate, undisclosed |
| Autoimmune | alumis | 3/6 | 259 | C | 1,000 | Phase II | Growth, VC, Xover |
| Oncology | SCORPION | 7/16 | 150 | C | 845 | Phase I | Family Office, Hedge, VC, Xover |
| Respiratory | areteia therapeutics ² | 2/13 | 425 | A1 | 843 | Phase III | Corporate, Growth, VC, Xover |
| Oncology | Rakuten | 3/6 | 119 | E | 819 | Phase III | Corporate, Unknown |

Valuation³ ■ Step-Up ■ Flat Rd ■ Step-Down

Crossover, corporate momentum continued; possible IPO value mismatch

Crossover investment in private biopharma companies remained strong in 2024, providing critical capital for development and IPO flexibility. However, the median pre-money valuation for 18 IPOs in 2024 was \$458M, significantly lower than the post-money valuations on this list. Only one company on this list (Rakuten) had a post-money valuation below the highest IPO pre-money of 2024 (CG Oncology).

Corporate investments also remained robust, supporting both early and later-stage companies. Key corporate participants in top valued deals included Nvidia, Regeneron (2 deals), Sanofi (2 deals), Google Ventures, and Dai-ichi.

Lookback: 2022's largest post-money deals deliver strong financings and an IPO

A review of the top post-money valuations from 2022 reveals mixed, but largely positive progress over the past two years. Neumora completed an IPO, while five companies secured additional new investor-led equity: Indigo and Treeline raised large rounds without disclosing valuation, Inari raised at a flat valuation and ArsenalBio (1.5x) and Eikon (1.3x) raised equity at step-ups. Oceanbio went out of business, three have not yet raised funds, and one completed a smaller add-on round.

Data from PitchBook as of 12/15/24. Covers private, venture-backed investment. ¹Financing data based on information available from PitchBook, including post-money values and step-up, flat and down round calculations. ²Originally announced in prior years. ³Step-Ups calculated using Pitchbook valuation data for previous and new financing as follows: Divide new pre-money valuation by previous round post-money valuation. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.



Biopharma Investment: Private M&A and IPO Analysis

Annual 2024



HSBC Innovation Banking

Biopharma Private VC-Backed M&A¹ Analysis

2018–2024



Private M&A deals and dollars show upsized activity focused on preclin & phase I

M&A MEDIAN VALUES

| Date | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|------------------------------|---------|---------|---------|---------|---------|---------|----------|
| Deals | 15 | 15 | 20 | 15 | 9 | 6 | 17 |
| Up-Front (\$M) | 140 | 250 | 315 | 370 | 320 | 305 | 800 |
| Milestone TBE (\$M) | 400 | 375 | 138 | 350 | 100 | 500 | - |
| Total Deal (\$M) | 480 | 600 | 608 | 525 | 405 | 828 | 1,100 |
| \$1B+ Total Deal Value Exits | 4 (27%) | 3 (20%) | 7 (35%) | 5 (33%) | 3 (33%) | 3 (50%) | 10 (59%) |

\$1B+ private deals abound in 1H 2024

Private M&A activity sustained the momentum from 2H 2023 into 2024, reaching a four-year high in deal volume and seven-year high in up-front and total deal size. Notably, ten deals exceeded \$1B+ total value.

Despite the lofty deal sizes, the median total capital invested into these companies also hit a seven-year high at \$132M, doubling the median equity raised in any year except 2022 (\$126M).

M&A Breakdown

10/17 M&A >\$1B total deal value. There were seven deals that were acquired for \$1B+ up-front

Median time to exit from first-financing: 4.4 years

11/14 M&A were preclin (4) or phase I (7)

Top M&A Lead Indications

Oncology (3)

Autoimmune (3)

Orphan/Rare (3)

Top Acquirers

Abbvie and Novartis (3 deals), J&J (2 deals)

NOTABLE 2024 M&A Deals

□ \$1B+ Total Deal Value M&A

| | | |
|-----------------------------|--------------------------------------|---|
| AIOLOS BIO → GSK | AMOLYT PHARMA → AstraZeneca | IRONSHORE PHARMACEUTICALS → Collegium. PHARMACEUTICAL |
| ProfoundBio → Genmab | escient pharmaceuticals → Incyte | ALIADA THERAPEUTICS → abbvie |
| mariana ONCOLOGY → NOVARTIS | PROTEOLOGIX → Johnson&Johnson | jnana Therapeutics → Otsuka |
| HL-Bio → Biogen | NUMAB ² → Johnson&Johnson | KATE THERAPEUTICS → NOVARTIS |
| EyeBio → MERCK | celsius → abbvie | NIMBLE THERAPEUTICS → abbvie |
| Calypso biotech → NOVARTIS | APEIRON BIOLOGICS → Ligand | |

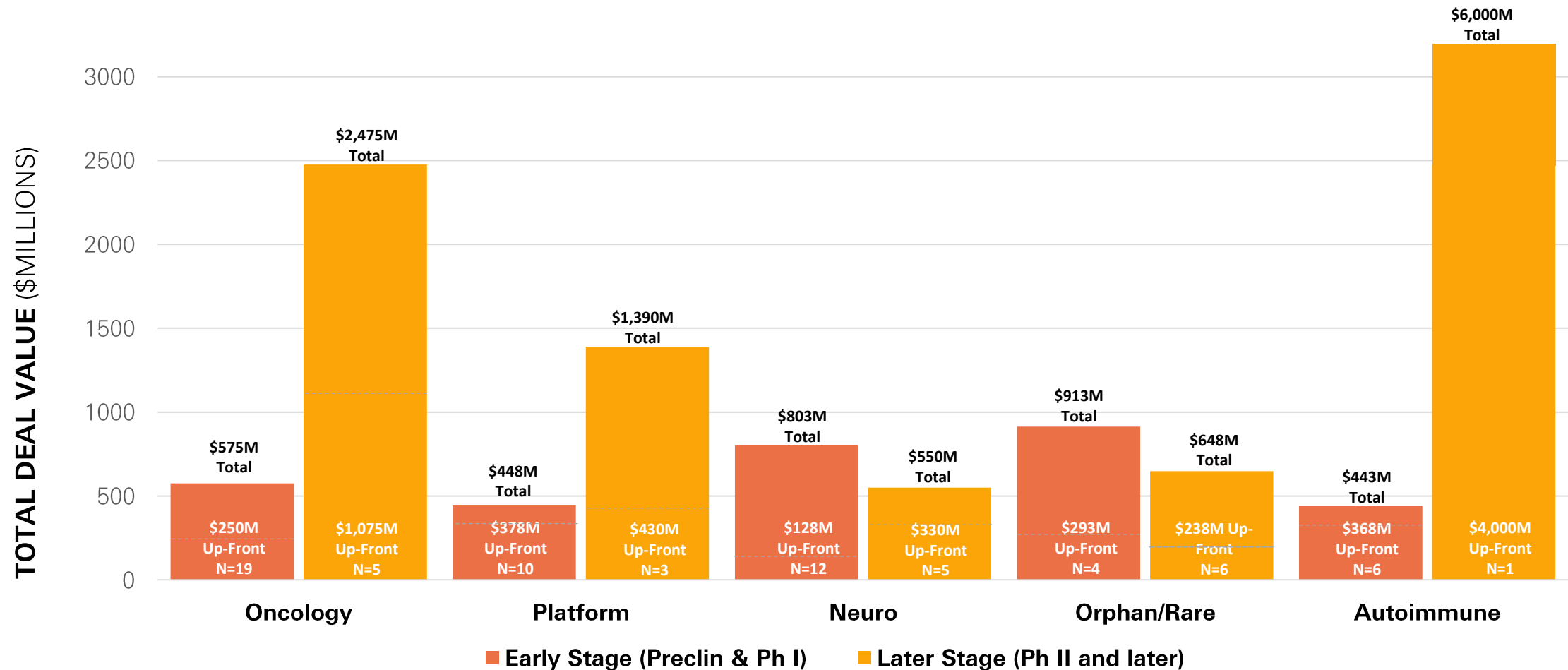
¹Biopharma M&A defined as private, venture-backed M&A with an upfront payment of at least \$75M, calculated on a best-efforts basis. ²Acquisition of Yellow Jersey Therapeutics, a subsidiary of Numab. Data sources: PitchBook, public news articles and conversations with investors and companies. Thanks to Mind Machine for slide strategy, creative, and design.

Biopharma Private M&A¹ by Top Indications²

2018–2024



Seven-year Median Up-Front and Total Deal Values in Most Active Indications



¹Biopharma M&A defined as private, venture-backed M&A with an upfront payment of at least \$75M, calculated on a best-efforts basis. ²Indication defined as lead asset focus area or focus delineated in the company's website. If preclinical with multiple areas of potential focus, it is defined as Platform. Data sources: PitchBook, public news articles and conversations with investors and companies. Thanks to Mind Machine for slide strategy, creative, and design.

Biopharma Private VC-Backed IPO¹ Analysis

2018–2024

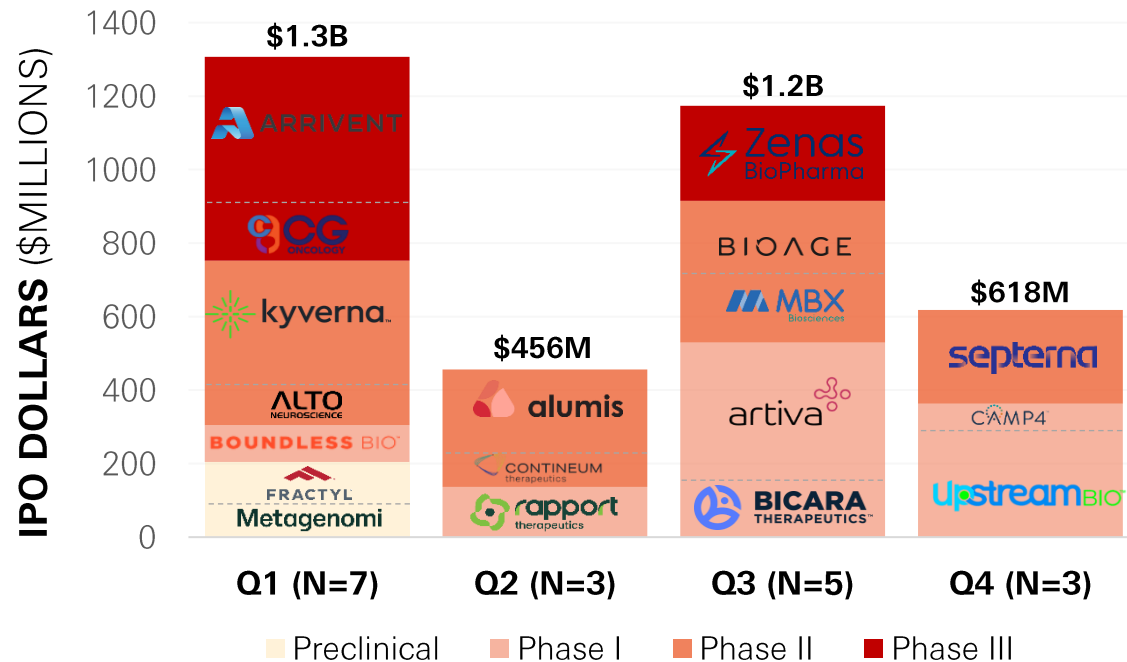


IPOs transitioned to clinical-stage assets; strong step-ups to IPO and quick time to listing

IPO ACTIVITY 2018–2024

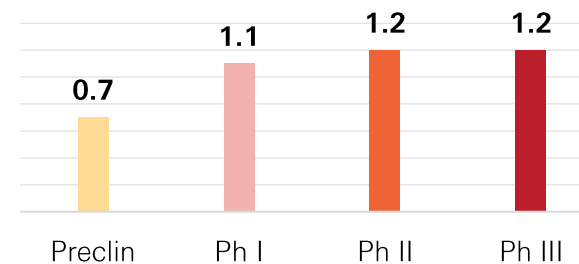
| Date | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---------------------|------|------|------|------|------|------|------|
| Venture-Backed IPOs | 55 | 50 | 83 | 96 | 19 | 11 | 18 |

QUARTERLY IPO DOLLARS RAISED BY STAGE



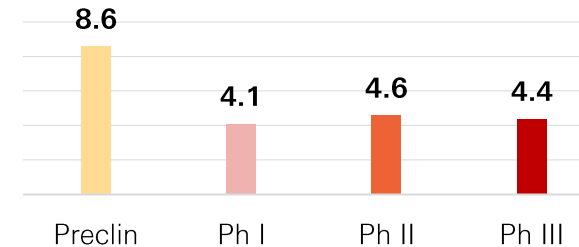
AVERAGE STEP-UP TO IPO BY STAGE³

(Pre-money IPO/Last Private Post-money)



AVERAGE TIME TO IPO BY STAGE²

(Time to IPO from first-financing, in years)



IPOs spiked in Q1 and Q3

2024 IPOs nearly doubled 2023 activity but fell short of expectations given a strong Q1 and the sheer number of companies that have raised mezzanine (crossover) round financings in recent years. IPOs in the second half of 2024 showed resilience in the public market, raising more IPO dollars. Post-IPO, two of eight traded up, with an average performance of -19%.

The preclinical IPOs in Q1 struggled in the public market, prompting a shift toward phase I and phase II public offerings starting in Q2.

Two of the four oncology-focused IPOs (both phase III) were up 50% from their IPO price. However, despite significant interest and investment in private autoimmune deals, all four autoimmune deals traded down post-IPO.

Positive step-ups and quick IPO trajectory

From a venture-investor and company perspective, it was promising to see many of the IPOs achieve step-up in valuations from their last private round, despite the revaluation trends of the past two years. The highest IPO step-ups were Kyverna (2.3x) and Septerna (1.5x).

The strategy of a strong Series A, followed by a mezzanine round and a swift IPO, remains an option at this point. IPOs occurred quickly in 2024, with only six of eighteen IPOs taking longer than four years from first-financing. Biopharma as a sector continued to show shorter median time to exit through M&A or IPO than any other healthcare sector.

¹Biopharma IPOs defined as private, venture-backed deals with an IPO raise of at least \$25M. ²Time to IPO calculated as years between first venture financing or spin-out and date of IPO. ³Step Up/Down to IPO calculated as follows: divide last private round post-money valuation with IPO pre-money valuation. Data sources: PitchBook, public news articles and conversations with investors and companies. Thanks to Mind Machine for slide strategy, creative, and design.



















Biopharma Private VC-Backed IPO¹ Analysis

2024



IPO medians: \$182M in proceeds on 1.1x step-up in 4.2 years from first round; -33% post-IPO

2024 BIOPHARMA IPO MEDIANS

| Date | Company | Indication | Stage | Time to IPO ² | Step-up to IPO ³ | IPO Dollars Raised (\$M) | IPO Post Money (\$M) | Performance to IPO Price (12/31) |
|-------|--|---------------|-------------|--------------------------|-----------------------------|--------------------------|----------------------|----------------------------------|
| 1/25 |  CG ONCOLOGY | Oncology | Phase III | 9.5 | 1.3x | 380 | 1,210 | +51% |
| 1/26 |  ARRIVENT | Oncology | Phase III | 1.9 | 1.1x | 175 | 575 | +48% |
| 2/2 |  FRACTYL health | Metabolic | Preclinical | 12.7 | 0.7x | 110 | 714 | -86% |
| 2/2 |  ALTO NEUROSCIENCE | Neurology | Phase II | 4.2 | 1.3x | 148 | 428 | -74% |
| 2/8 |  kyverna | Autoimmune | Phase II | 4.0 | 2.3x | 319 | 898 | -83% |
| 2/9 |  Metagenomi | Platform | Preclinical | 4.5 | Unknown | 94 | 563 | -76% |
| 3/28 |  BOUNDLESS BIO | Oncology | Phase I | 4.5 | 1.0x | 100 | 356 | -82% |
| 4/5 |  CONTINEUM therapeutics | Neurology | Phase II | 6.0 | 1.2x | 110 | 402 | -8% |
| 6/7 |  rapport therapeutics | Neurology | Phase I | 1.3 | 1.1x | 156 | 621 | +4% |
| 6/27 |  alumis | Autoimmune | Phase II | 3.3 | 0.6x | 210 | 830 | -51% |
| 7/19 |  artiva | Autoimmune | Phase I | 4.1 | 0.3x | 167 | 279 | -16% |
| 9/13 |  Zenas BioPharma | Autoimmune | Phase III | 1.8 | Unknown | 259 | 710 | -52% |
| 9/13 |  MBX Biosciences | Metabolic | Phase II | 5.4 | 1.1x | 188 | 534 | +15% |
| 9/13 |  BICARA THERAPEUTICS | Oncology | Phase I | 3.5 | 1.2x | 362 | 979 | -3% |
| 9/26 |  BIOAGE | Metabolic | Phase II | 7.3 | 1.1x | 198 | 615 | -68% |
| 10/11 |  CAMP4 | Hematology | Phase I | 8.4 | 0.5x | 75 | 215 | -3% |
| 10/11 |  upstreamBIO | Respiratory | Phase II | 2.3 | 0.9x | 255 | 873 | -3% |
| 10/25 |  septerna | Endocrinology | Phase I | 2.8 | 1.5x | 331 | 799 | +27% |

¹Biopharma IPOs defined as private, venture-backed deals with an IPO raise of at least \$25M. ²Time to IPO calculated as years between first venture financing or spin-out and date of IPO. ³Step Up/Down to IPO calculated as follows: divide last private round post-money valuation with IPO pre-money valuation. Data sources: PitchBook, public news articles and conversations with investors and companies. Thanks to Mind Machine for slide strategy, creative, and design.



Dx/Tools Early-Stage: First-Financing Analysis (Seed/Series A)

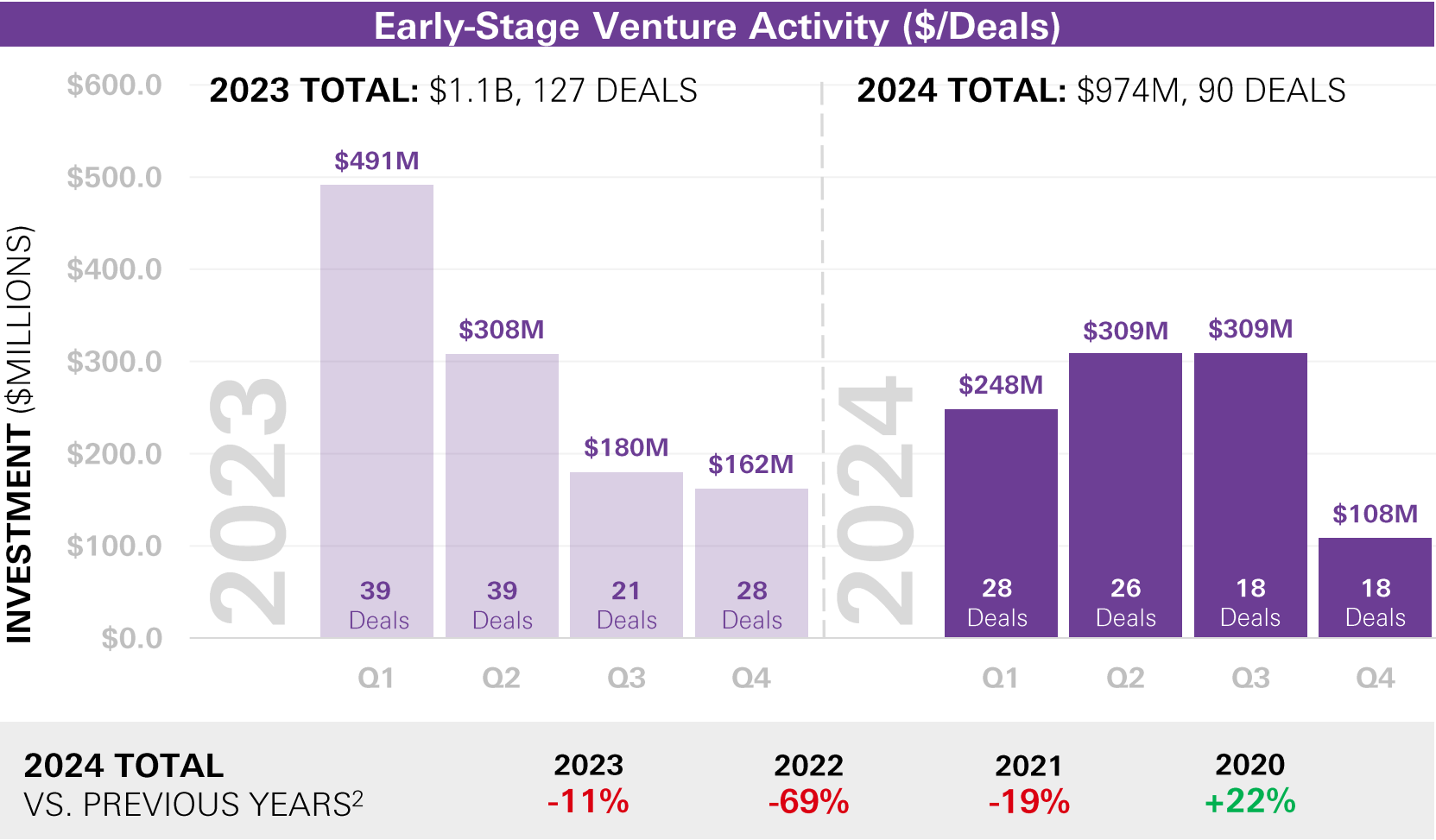
Annual 2024

Dx/Tools First-Financing¹ Analysis

2023–2024 US & Europe



First-financing slowdown persists; corporates helped fill investor gap



First-financing continues to fall

Early-stage investment and deals activity in dx/tools fell to a four-year low in 2024, driven by Series B financing risk and a challenging exit environment.

Securing Series B funding for development-stage and pre-commercialization (pilot programs) companies in R&D Tools has been difficult, with new investors hesitant to commit. This reluctance has pushed Series A investors to use remaining dry powder on extended insider-rounds, aiming to reach a compelling inflection point for new investors' participation, often an unpredictable process. Investors now prefer later-stage commercialization rounds where technology risks are resolved and exits are closer.

The IPO window remained largely closed, a stark contrast from the IPO boom of 2020–2021, when thirteen IPOs achieved market caps above \$1B. Poor performance plagued these IPOs, with six of nine venture-backed IPOs from 2021 down over 70% from their IPO price and one went out of business (Zymergen).

M&A activity was limited, requiring sustained revenue growth rather than potential, with few acquirers actively pursuing deals. Tools consolidators focused on buying revenue over innovation, while diagnostics acquirers have been largely inactive. There is hope that mid-cap players such as Natera and Exact Sciences may enter the venture-backed M&A space.

Corporate investment supports early venture

With traditional venture investment lagging, corporate investors participated in five of the top seven largest first-financing deals in 2024.

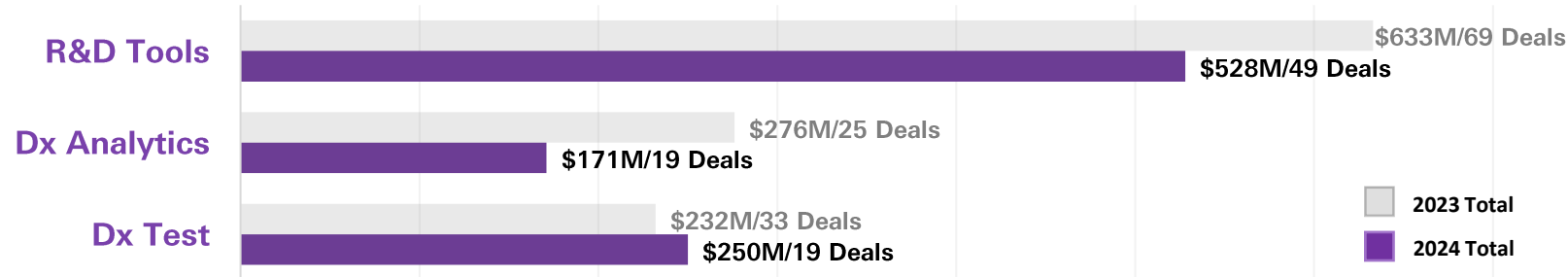
Data from PitchBook as of 12/15/24, with 12/16-12/30 estimated based on best efforts basis. Covers private, venture-backed investment. ¹First-financing defined as initial Seed or Series A financing of \$2M+. ²Using specific PitchBook search functions to approximate sector specific funding from previous years. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Dx/Tools First-Financing¹ by Subsector

2023–2024 US & Europe



Liquid biopsy led Dx Test to increased investment, as Tools and Analytics declined



Dx Test investment spurred by liquid biopsy

Dx Test investment increased in 2024, with oncology dominating four of the six largest deals. Additionally, five smaller anti-infective deals were noted.

While investment dollars remain modest, diagnostics are poised to play a critical role in advancing precision medicine over the next decade. This growth in precision medicine² creates an opportunity for precision diagnostics and highlights the importance of dx tests in establishing surrogate endpoints in clinical trials and stratifying patients for treatment.

R&D Tools led by radiopharma and comp bio

Radiopharmaceuticals have emerged as a highly attractive area in biopharma, with R&D Tools companies such as Pantera securing substantial funding for manufacturing and supply capabilities. Additionally, eleven R&D Tools first-financing companies (22%) are leveraging computational biology as their core technology, led by Chai Discovery.

Dx Analytics

Investment in this subsector has declined in recent years, despite the advancements in AI/ML. Established later-stage companies with substantial funding and strategic partnerships may be overshadowing early-stage opportunities, limiting investor interest.

Numbers at a glance (10 largest first-financing deals)

| Subsector | Deals | Location | Deals |
|--------------|---------|----------|---------|
| R&D Tools | 5 deals | OUS | 5 Deals |
| Dx Test | 4 deals | NorCal | 2 Deals |
| Dx Analytics | 1 deal | | |

| | | Indication | Size of Round (\$M) | Deal Date | Location | | | Indication | Size of Round (\$M) | Deal Date | Location |
|---|--|------------------------|---------------------|-----------|-----------------|----|--|--------------------|---------------------|-----------|--------------------|
| 1 | | R&D Tool Radiopharma | 148 | 9/11 | Mol, Belgium | 6 | | R&D Tool Discovery | 35 | 2/19 | Paris, France |
| 2 | | Dx Test Platform | 57 | 5/13 | Boston, MA | 7 | | R&D Tool Discovery | 30 | 9/9 | New York, NY |
| 3 | | Dx Analytics Neuro | 54 | 1/1 | Santa Clara, CA | 8 | | R&D Tool Discovery | 26 | 6/11 | Solna, Sweden |
| 4 | | Dx Test Women's Health | 40 | 4/25 | Daly City, CA | 9 | | Dx Test Oncology | 23 | 6/11 | Saint Paul, MN |
| 5 | | R&D Tool Manufacturing | 39 | 9/12 | Paris, France | 10 | | Dx Test Oncology | 22 | 5/23 | Frankfurt, Germany |

Data from PitchBook through 12/15/24. Covers private, venture-backed investment. ¹First-financing defined as initial Seed or Series A financing of \$2M+. ²Precision medicine defined as medical care designed to optimize efficiency or therapeutic benefit for particular groups of patients, especially by using genetic or molecular profiling. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Dx/Tools Valuation¹ Analysis

2023–2024 US & Europe



Computational, gene and cell manufacturing, and radiopharma services excited VCs

| Stage | Deals with Valuations ¹ versus Total Activity | Median Round Size | Pre-Money Valuation (by Percentile) in 2024 | |
|-----------------|---|------------------------------|--|---------------|
| Angel / Seed | 12 of 26 | \$5M \$6M (2023) | 25th Pct | \$10M |
| | | | 50th Pct | \$11M |
| | | | 75th Pct | \$15M |
| Series A <\$20M | 24 of 34 | \$10M \$10M (2023) | 25th Pct | \$20M |
| | | | 50th Pct | \$37M |
| | | | 75th Pct | \$80M |
| Series A >\$20M | 14 of 23 | \$31M \$30M (2023) | 25th Pct | \$23M |
| | | | 50th Pct | \$44M |
| | | | 75th Pct | \$111M |

Seed round focus on computation, gene/cell manufacturing

The three highest pre-money valuations for Seed deals targeted emerging areas in tools, including computational analysis (Modulo Bio, \$39M pre-money) and cell and gene manufacturing (Cirsium, \$22M pre-money and Exthymic, \$20M pre-money). Notably, five of the eight companies with the largest Seed pre-money valuations were computational focused.

R&D Tools dominate larger Series A pre-money deals

In 2024, seven Series A pre-money values exceeded \$100M. R&D Tools companies claimed six of the seven spots, led by computational companies CoRegen (\$200M pre-money) and DeepCure (\$175M pre-money) and radioisotope production deals Pantera (\$148M pre-money) and Nucleus (\$150M pre-money). The remaining spot went to Earli (\$170M pre-money), a Dx Test oncology-focused company that raised a Series A extension.

Data from PitchBook as of 12/15/24. Covers private, venture-backed investment. ¹Valuation refers to companies that had valuation information per PitchBook. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.



Dx/Tools Investment: All Venture Deals

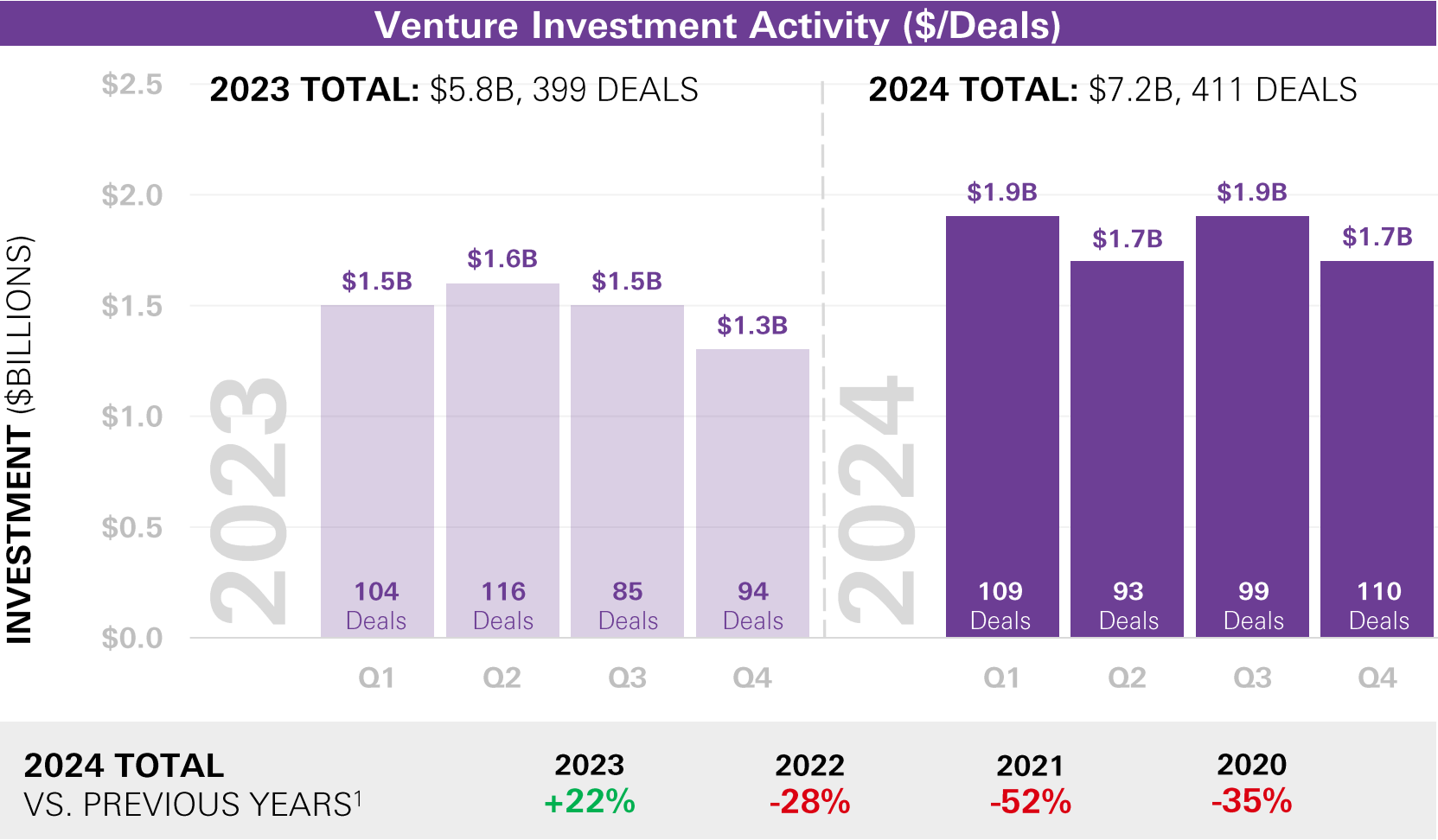
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Dx/Tools Analysis (All Deals)

2023–2024 US & Europe



Top deals secured large fundings, others looked to bridge to new rounds



Mega deals control new investor-led financings

While the dx/tools sector continues to face challenges with exit opportunities, investors concentrated on a select subset of deals, primarily those with strong commercial stories, to back with large rounds. Although dollars deployed surpassed 2023, investment levels remained significantly below the prior three years. Mega deals dominated, as the top 10% of deals accounted for 48% of investment dollars.

Companies with high valuations from 2020–2021 that demonstrated strong revenue growth have secured new investor rounds, often at flat or slightly up rounds as valuation metrics have moved lower in the current cycle. Others have been forced to rely on additional bridge financing and focus on cash conservation and their strongest product, hoping to hit a value inflection point to attract new investor interest.

For early commercial companies, new investors have prioritized companies with established reimbursement (dx test) or strong revenue growth (R&D Tool, analytics). A small subset of companies with \$10M or less in revenues have secured flat rounds but often included structured incentives, such as warrants or preferential returns, to attract new investors. This approach helps existing investors to maintain fund TVPI numbers² while providing an upside for new investors. While this dilutes management and founders, it is obviously preferable to consolidation or shutdown.

PE/growth and corporate investors return

PE, crossover, and growth investors returned to dx/tools, focusing on commercial growth stories and participating in the sector's seven largest financings. Corporate support was also evident, with contributions from industry leaders such as Samsung, Quest, and GE and big pharma players such as Merck, Astellas, and BMS.

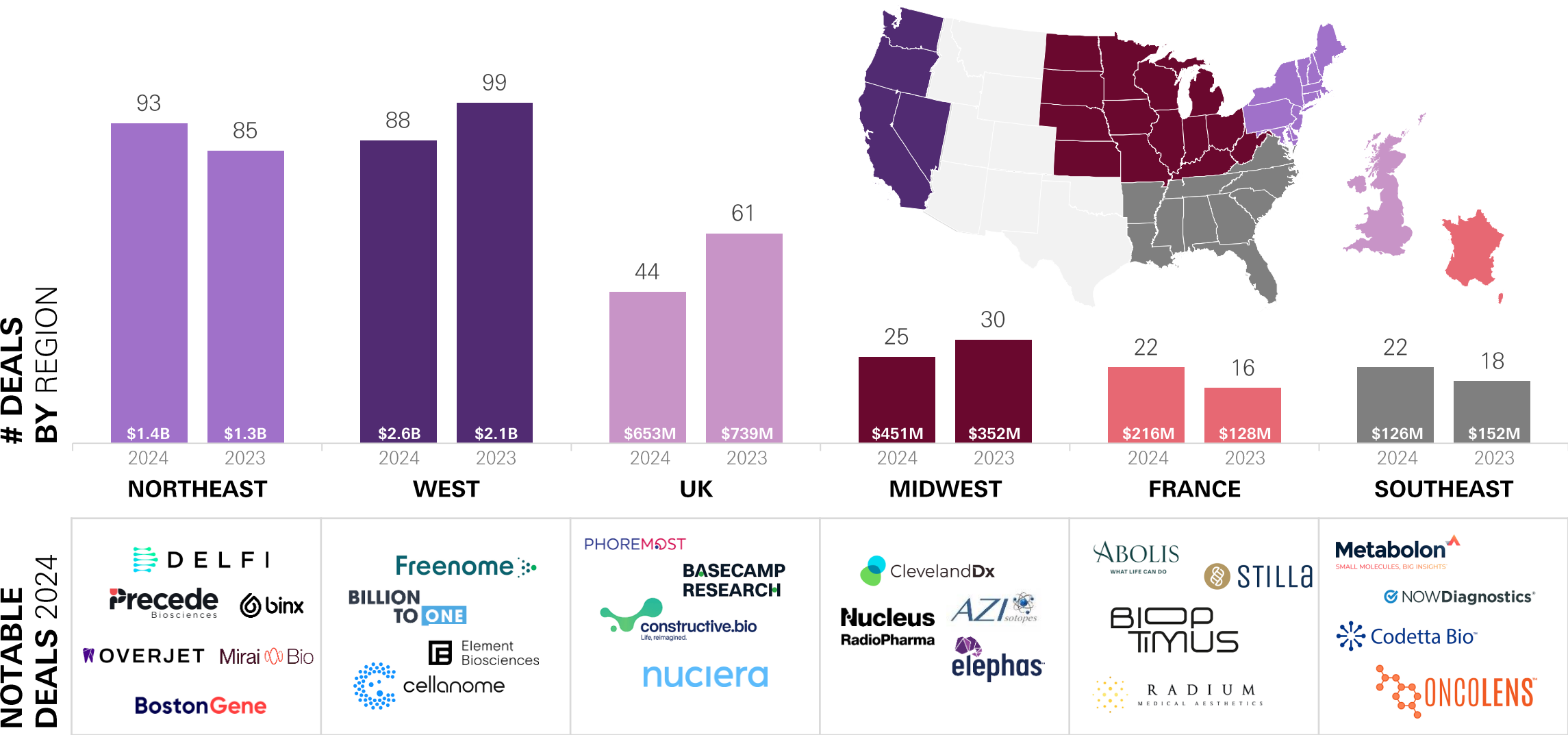
Data from PitchBook as of 12/15/24, with 12/16-12/30 estimated based on best efforts basis. Covers private, venture-backed investment. ¹Using specific PitchBook search functions to approximate sector specific funding from previous years. ²TVPI is defined as Total Value to Paid-in Capital, a metric used by investors to value current portfolio that have not yet achieved an exit. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Dx/Tools Deal Activity by Region

2023–2024 US & Europe



Northeast topped deal activity; west secured more investment dollars



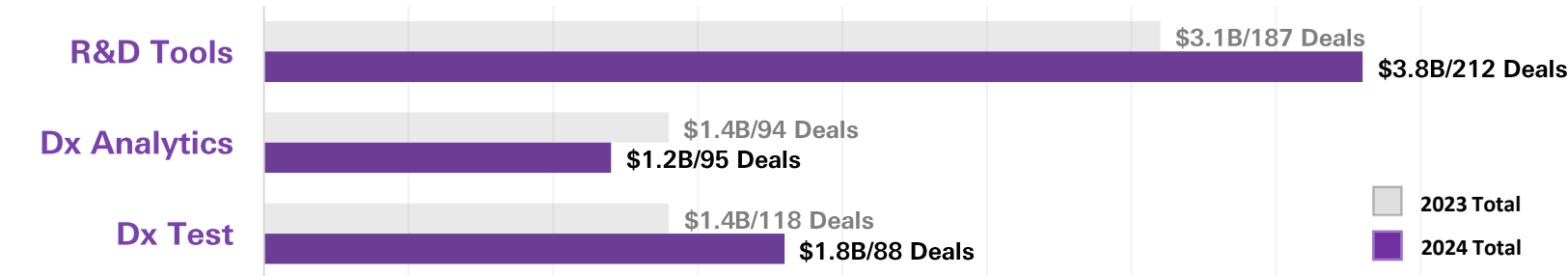
Data from PitchBook though 12/15/24. Covers private, venture-backed investment. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Dx/Tools VC Investment by Subsector

2023–2024 US & Europe



R&D Tools and oncology-focused Dx Test deals staged comeback



| | | Indication | Size of Round/ (\$M) Step-up? ¹ | Date/ Round | Location |
|---|-----------------------|----------------------|--|-------------|---------------|
| 1 | Element Biosciences | R&D Tool Discovery | 277 | 7/11 D | San Diego, CA |
| 2 | freenome | Dx Test Oncology | 254 | 2/15 F | SF, CA |
| 3 | colossal ² | R&D Tool Discovery | 163 | 7/23 B | Austin, TX |
| 4 | cellanome | R&D Tool Discovery | 150 | 1/29 B | Palo Alto, CA |
| 5 | PANTERA | R&D Tool Radiopharma | 148 | 9/11 A | Mol, Belgium |

| | | Indication | Size of Round/ (\$M) Step-up? ¹ | Date/ Round | Location |
|----|--------------------|-----------------------------|--|-------------|-------------------|
| 6 | BILLION TO ONE | Dx Test Platform | 130 | 6/21 D | Menlo Park, CA |
| 7 | ALAMAR BIOSCIENCES | R&D Tool Discovery | 128 | 2/26 C | Fremont, CA |
| 8 | BostonGene | Dx Analytics Oncology | 120 | 12/5 B2 | Waltham, MA |
| 9 | NUSANO | R&D Tool Radiopharma | 115 | 10/1 C | Santa Clarita, CA |
| 10 | cleerly | Dx Analytics Cardiovascular | 106 | 12/4 C | Denver, CO |

Valuation¹ ■ Step-Up ■ Flat Rd ■ Step-Down

R&D Tools and Dx Test investment rose

Investment in R&D Tools increased in 2024 for the first time since 2021, halting a decline that saw a more than a 50% drop in funding. While advancements in new technology, including AI/ML, have enhanced discovery capabilities, limited exit opportunities, high instrumentation costs, and litigation risks from incumbents have restrained growth. Radiopharma manufacturing and supply, a hot area embraced by biopharma, accounted for three of the top 10 R&D Tools investments in 2024. Among the largest deals, the top two were later rounds (Series D and F), with step-downs in valuation, while the next two were Series B up rounds.

Dx Tests investment also rose in 2024, with dollar amounts surpassing 2023 and matching 2022 levels, though deal volume declined. Nonetheless, investment remains down by 50% compared with 2021 and 2020. Six of the top eight dx test deals were Series D or later, with commercial scalability attracting growth investor interest. Of these, three were up rounds (BillionToOne, CytoVale, and ClevelandDx), and two were down rounds (Freenome and Karius). Oncology maintained its top position in dx test funding since 2021, securing four of the top eight largest dx test deals. The remaining four included three anti-infective deals and one focused on sepsis.

Dx Analytics dollars dropped, but deals remained steady

Precision medicine continues to attract investment in dx analytics, defined as actionable tools to guide physician treatment decisions. Tempus's IPO in 2024 was a notable milestone for the sector, though the company had raised \$1.4B in private funding before the IPO and is currently valued at \$5.6B, nearly 50% below its 2022 post-money valuation.

Data from PitchBook through 12/15/24. Covers private, venture-backed investment. ¹Step-up analysis uses PB supplied valuations if available. ²Originally announced in prior years. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.






Dx/Tools Most Active Investors¹

2024 US & Europe



Stratified growth in venture/angel investment; corporate activity rose

ALL DEALS

| Angel/VC | Corporate ³ | Growth ² |
|--|--|--|
| 7  | 6  | 3  |
| 5  4  | 3  | 2      |
| 3         | 2     | |
| 2                    |      | |

Data from PitchBook as of 12/15/24. Covers private, venture-backed investment. ¹Most Active Investors only include first investment into a new portfolio company, not follow-on financings. ²Growth Investors defined as investment firms that typically invest in later-stage companies that either are revenue scaling, or the round is anticipated to be the last before an IPO. ³Note that families of funds are combined for this slide, as are corporate and corporate venture with the same parent. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.



Larger Series B deals defied Dx/Tools trend of flat and down rounds

| Stage | Deals with Valuations ¹ versus Total Activity | Median Round Size | Up Round ² Percentage | Pre-Money Valuation (by Percentile) in 2024 | |
|-----------------|---|---------------------------|-----------------------------------|--|----------|
| Series B <\$40M | 16 of 26 | \$27M (\$8M in 2023) | 44% (7/16) 63% (12/19 in 2023) | 25th Pct | \$37M |
| | | | | 50th Pct | \$53M |
| | | | | 75th Pct | \$90M |
| Series B >\$40M | 5 of 13 | \$100M (\$60M in 2023) | 80% (4/5) 67% (6/9 in 2023) | 50th Pct | \$625M |
| Series C | 8 of 18 | \$51M (\$47M in 2023) | 25% (2/8) 50% (4/8 in 2023) | 50th Pct | \$105M |
| Series D+ | 10 of 18 | \$63M (\$21M in 2023) | 40% (4/10) 50% (3/6 in 2023) | 25th Pct | \$89M |
| | | | | 50th Pct | \$220M |
| | | | | 75th Pct | \$1,008M |

More down rounds in 2024

Dx/Tools deals saw many flat to down rounds in 2024. Only 43% (17 of 39) of deals with valuation information were up rounds, compared to 64% (25 of 39) in 2023. However, larger Series B rounds bucked this trend, with four of five deals with valuation information achieved up rounds (Cellanome at a 1.1x step-up, CN-Bio at 1.0x, Elegen at 1.3x, and Gameto at 1.2x).

Colossal pre-money values in Series B

Five Series B deals in 2024 had pre-money valuations over \$200M. Three of them were R&D Tools: Colossal Labs (\$1.4B pre-money), Cellanome (\$375M pre-money) and BigHat (\$260M pre-money). The remaining two were dx analytics company Octagos (\$800M pre-money) and dx test company Delphi (\$625M pre-money).

Mixed bag in later-stage deals

In Series C and later deals, dx analytics saw no up rounds, with all three deals flat. Dx Test deals had mixed results, with three down rounds and four up rounds. R&D Tools also experienced variability, with four down rounds, two flat deals, and two up rounds.

Data from PitchBook as of 12/15/24. Covers private, venture-backed investment. ¹Valuation refers to companies that had valuation information per PitchBook. ²Up round refer to companies that had valuation information available for both the new and last financing, with the new round pre-money greater than the last round post-money. Up round calculated using Pitchbook valuation data: Divide new pre-money valuation by previous round post-money valuation – if greater than one, deal is labeled as an up round. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Dx/Tools Largest Post-Money Values¹

2024 US & Europe



Traditional VC, growth and corporates led highest-valued dx/tools deals

LARGEST POST-MONEY VALUATIONS BY DX/TOOLS SUBSECTOR

| Subsector | Company | Date | Deal Size (\$M) | Round | Post \$ (\$M)/ Step-up? ³ | Focus | Notable/Lead New Investor(s) |
|--------------|-------------------------|------|-----------------|-------|---|----------------------------------|---------------------------------|
| Dx Test | freenoma | 2/15 | 254 | F | 2,200 | Oncology/ Development | Corporate, Growth |
| R&D Tool | colossal ² | 7/22 | 162 | B | 1,562 | Gene-editing/ Development | Angels, VC |
| Dx Analytics | BostonGene | 12/5 | 120 | B2 | 1,500 | Oncology/ Commercial | Corporate |
| Dx Test | BILLION TO ONE | 6/21 | 130 | D | 1,350 | Oncology/ Commercial | Growth, VC |
| R&D Tool | Element Biosciences | 7/11 | 277 | D | 1,044 | Sequencing/ Commercial | Corporate, Xover |
| Dx Analytics | OCTAGOSHealth | 7/9 | 43 | B | 843 | Cardiovascular/ Commercial | Growth, VC |
| Dx Test | DELFI | 6/3 | 100 | B | 725 | Oncology/ Commercial | Corporate |
| R&D Tools | SmartCella SOLUTIONS | 7/8 | 54 | B | 591 | Gene/Cell Therapy/ Commercial | Corporate, Family Office |

Valuation³ ■ Step-Up ■ Flat Rd ■ Step-Down

Up rounds highlighted flight to top deals, optimistic exit hopes

Mirroring 2023, the highest-valued private deals in 2024 saw more up rounds than down rounds (four versus two), highlighting the “haves versus have not” dynamic in the sector. While many dx/tools deals struggle to attract new VC investors at any valuation, top deals continued to secure substantial investment at large valuations, with traditional VCs acting as new investors in three of the four highest-valued step-ups in 2024.

Growth and traditional VCs placed bets in 2024 on the potential for large M&A deals or a reopened IPO window in the near term.

Corporate and VCs led top valuation plays

Corporate investment in the highest-valued deals remained strong, with four of eight deals in 2023 including corporate participation and three of eight in 2024 including corporate participation. Notable participants in 2024 included Samsung, Quest, and Merck Global Health.

Lookback: 2022's largest post-money values show a large IPO, continued financings

A review of the largest post-money deals from 2022 reveals mixed progress. Tempus achieved a significant IPO, and Viz.ai completed a small add-on round. Four companies raised large financings, - yielding one up round (BilliontoOne at 1.3x), two flat rounds (Resilience, Delphi), and one down round (BostonGene at 0.6x).

Data from PitchBook as of 12/15/24. Covers private, venture-backed investment. ¹Financing data based on information available from PitchBook, including post-money values and step-up, flat and down round calculations. ²Originally announced in prior years. ³Step-Ups calculated using Pitchbook valuation data for previous and new financing as follows: Divide new pre-money valuation by previous round post-money valuation. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.



Dx/Tools Investment: Private M&A Analysis

Annual 2024

Dx/Tools Private VC-Backed M&A¹ by Indication

2018–2024



The two-year trend of a rough M&A environment continued in 2024

M&A MEDIAN VALUES

| Date | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---------------------|-------|------|-------|-------|-------|-------|------|
| Deals | 10 | 6 | 11 | 25 | 5 | 6 | 4 |
| Up-Front (\$M) | \$126 | \$68 | \$350 | \$225 | \$100 | \$117 | \$97 |
| Milestone TBE (\$M) | \$- | \$- | \$- | \$- | \$- | \$13 | \$- |
| Total Deal (\$M) | \$161 | \$83 | \$350 | \$270 | \$100 | \$129 | \$97 |

NOTABLE 2024 M&A DEALS



2024 IPO: TEMPUS

7/14/24 \$411M raised; Post-IPO down 23% as of 12/31/24. Pre-money IPO value was a 0.6x step-down from last private round. Company raised \$1.4B in total private financing with its last post-money at \$10.3B on 10/20/22. Now trading at about half of last private post-money valuation.

2024 M&A activity remains slow

M&A activity over the past three years, both in volume and deal value, has remained significantly below the levels seen in 2020–2021. Acquirers have largely remained on the sidelines, increasing revenue ramp requirements and insisting on a clear path to profitability. Comp deal analyses have also taken a hit, as most of the IPOs from 2020-2021 have failed to maintain their market caps, with median declines exceeding 70% for those IPO classes. PE acquirers remain active, but the deal terms offered make it challenging for VCs to achieve strong returns.

Dx Test and analytics deals highlight exits

All four exits in 2024 were commercial-stage companies. Core and imaware generated good multiples based on last-round post-money valuations.

Lots of promise for private later-stage deals

While our prediction of large M&As in 2H 2024 did not materialize, the group of 19 \$100M+ Dx/tool financings over the past two years, many at significant revenue thresholds, should produce some strong M&A/IPO candidates. We anticipate a handful of significant exits in 2025.

¹ Dx/Tools M&A defined as private, venture-backed M&A with an upfront payment of at least \$50M. Data sources: PitchBook, public news articles and conversations with investors and companies. Thanks to Mind Machine for slide strategy, creative, and design.



Deep Dive: Computational Biology Analysis

Annual 2024

Computational Biology: Landscape

2024, US & Europe



Four main comp bio categories

Logos arranged in ascending order based on increasing deal size

AI Discovery (AID)

Post First-Financing



First-Financing

| | |
|------------------|---------------|
| First-Financing: | All Deals: |
| \$1.45B Raised | \$4.5B Raised |
| 15 Deals | 63 Deals |

Insight Platforms & Infrastructure (IPI)

Post First-Financing



First-Financing

| | |
|------------------|---------------|
| First-Financing: | All Deals: |
| \$133M Raised | \$1.3B Raised |
| 17 Deals | 47 Deals |

Diagnostics (Dx)

Post First-Financing



First-Financing

| | |
|------------------|---------------|
| First-Financing: | All Deals: |
| \$82M Raised | \$966M Raised |
| 7 Deals | 24 Deals |

Clinical Response Predication (CRP)



| | |
|------------------|---------------|
| First-Financing: | All Deals: |
| \$47M Raised | \$500M Raised |
| 5 Deals | 18 Deals |

In 2024, we identified 152 computational biology (comp bio) companies and analyzed 148 financing rounds that resulted in cumulative funding of \$7.3B.

For this analysis, to qualify as a comp bio company, a firm must apply computational tools to acquire novel chemical or biological insights in therapeutics, R&D Tools, and dx sectors only; have a leadership member with computational expertise; and have raised over \$2 million in a financing round.

Companies were classified into four categories, based on their products and use of computation:

- **AID:** optimization and discovery of novel targets, molecules, chemicals, and delivery systems.
- **IPI:** bio/chem characterization, development of data banks, computational infrastructure, and bio-manufacturing.
- **Dx:** diagnostics and long-term monitoring of biological markers.
- **CRP:** personalized medicine, clinical decision support software, and drug response prediction.

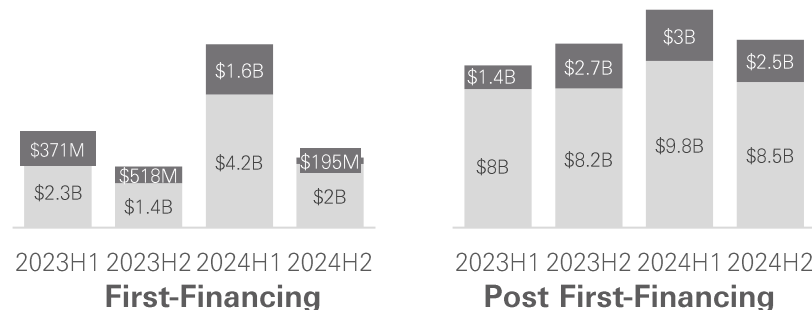
Computational Biology: Top Indicators

2024, US & Europe



Dollar Raised Comp vs. Non-Comp Bio

■ Comp Bio ■ Non-Comp Bio



Top 2024 Investors by Funding Round²

Top First-Financing

| Investor | Deals |
|-----------------------------------|-------|
| DIMENSION | 3 |
| LifeX Ventures Alumni Ventures | 3 |
| RACAPITAL | 2 |
| ARCH VENTURE PARTNERS | 2 |
| fist KdT Ventures | 2 |

All Deals

| Investor | Deals |
|---|-------|
| RACAPITAL | 5 |
| Lilly | 4 |
| M. VENTURES | 4 |
| Washington Research FOUNDATION WRF CAPITAL | 4 |
| NVIDIA | 3 |

Comp bio first-financing funding falters in 2H 2024

Comp bio first-financing surged to \$1.6B in 1H 2024, driven by Xiara's \$1B round, but fell 88% to \$195M in 2H 2024, more than 50% below the 2023 half-year average of \$445M. Deals dropped from 34 to 12, but the median size rose from \$8.5M to \$11.9M. Only one of the five \$50M+ comp bio deals took place in 2H (Hyku at \$64M).

AID still leads investments; IPI share increases

In 2H 2024, AID companies led first-financing rounds with 74% of funding (down from ~50% in 1H, excluding the Xiara deal), while IPI companies grew their share from 5% to 20%. DX saw no first-financing rounds, a two-year low.

Post first-financing slightly decreases

Post first-financing rounds decreased 17% for both comp and non-comp bio, with comp bio retaining a ~30% share at \$2.5B. AID companies were clear leaders, at 64% of all investments. Dx post first-financing dropped from \$648M in 1H 2024 to \$235M. Despite this decline, the top Dx companies shared a clear focus on liquid biopsy technologies, with Freenome, BillionToOne, and Delfi Diagnostics leveraging cfDNA for early detection through multi-omics, QCT molecular counting, and fragmentation analysis - showcasing the potential to guide personalized treatment decisions.

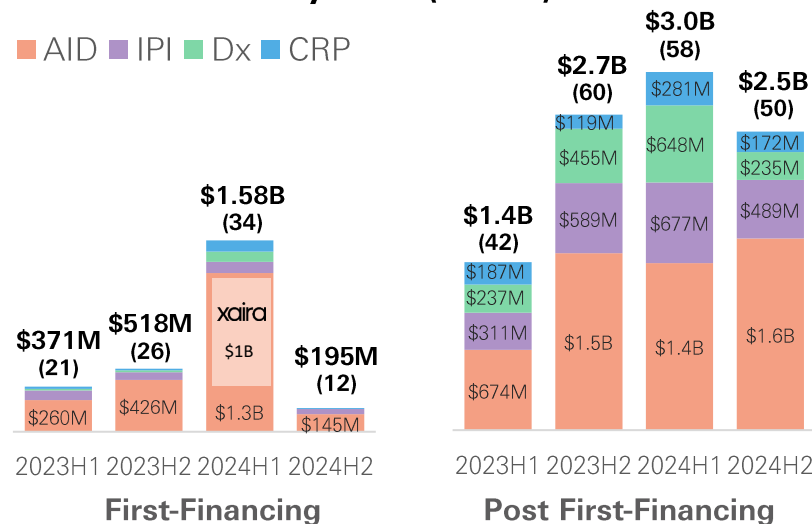
Investor mix was diverse, with growth, hedge, and corporates dominating later-stage

The top investors comprised a mix of traditional biopharma investors, generalist VCs, tech and bio corporates, and crossover funds.

For the later-stage comp bio companies raising large, highly-valued rounds, we noted new investors were growth/crossover investors like Sands and Premji, corporates like Microsoft joining insider-led rounds, or venture plus corporate syndicates like Andreessen Horowitz and Sanofi.

Dollars Raised by Half (Deals)

■ AID ■ IPI ■ Dx ■ CRP



Top 2024 Post-Money Valuations by Category¹

| Company | Deal Size | Valuation |
|---------------|-----------|-----------|
| xaira | \$1B | \$2.7B |
| Formation Bio | \$372M | \$1.7B |
| SCORPION | \$150M | \$845M |

| Company | Deal Size | Valuation |
|--------------|-----------|-----------|
| Freenome | \$254M | \$2.2B |
| BillionToOne | \$130M | \$1.4B |
| D E L F I | \$100M | \$725M |

| Company | Deal Size | Valuation |
|-------------|-----------|-----------|
| INARI | \$103M | \$1.65B |
| enveda | \$174M | \$400M |
| triveni BIO | \$115M | \$310M |

| Company | Deal Size | Valuation |
|-----------|-----------|-----------|
| PATHOS | \$62M | \$600M |
| UNLEARN | \$50M | \$360M |
| LINUS BIO | \$6M | \$170M |

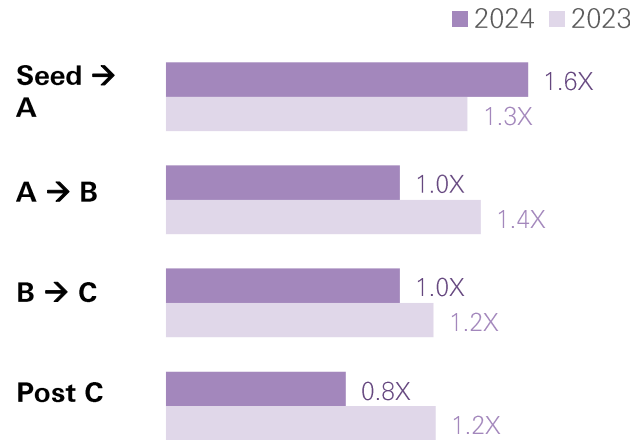
Data from PitchBook as of 12/15/24. ¹Companies shown include only ones with reported new-round valuation on PitchBook as of 12/15/24. ²Top Investors only include first investment into a portfolio company, not follow-on financings. Data sources: PitchBook, company websites, internal analysis.

Computational Biology: 12-Month Recap¹

2024, US & Europe



Median Step-Up Multiple by Round



Top Companies by Step-Up Multiple

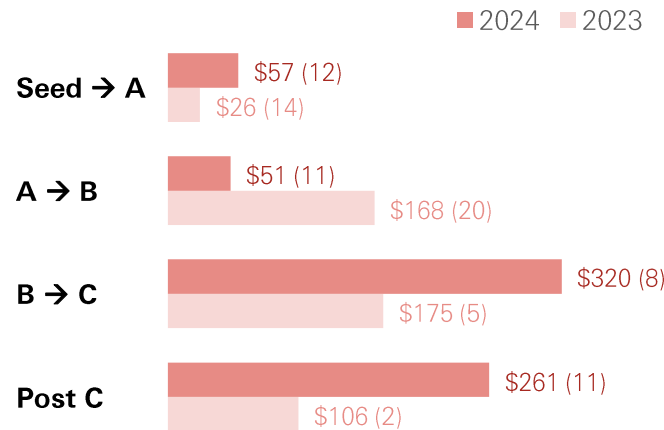
| | | | |
|----------|--------|--------|--------|
| Seed → A | (4.6x) | (4.5x) | (2.8x) |
| A → B | (2.2x) | (1.4x) | (1.3x) |
| B → C | (1.3x) | (1.2x) | (1.1x) |
| Post C | (1.4x) | (1.3x) | (1.3x) |

Comp bio step-up values down in later-stage rounds

Only 58 new investor-led comp bio ventures disclosed valuations in 2024, representing ~30% of all deals. The median step-up was 1.1x, a sharp decline from 1.3x in 2023. Seed to Series A step-up increased from 1.3x to 1.6x. However, a downward trend was noticeable across all post-Series A investment rounds, indicating a recalibration of valuations following the frothy market of 2021–2022 despite strong valuations emerging for AI-focused companies in the technology sector. Curiously, Series A and Series C and later deals saw pre-money values increase, likely because of strong partnerships, revenue, and/or clinical results.

Unsurprisingly, 10 of the 11 deals with step-ups exceeding 1.5x were Series A rounds. Among them, five were AID companies showcasing cutting-edge technologies, such as Moonwalk Biosciences, which focuses on precision epigenetic engineering, and Nabla Bio, which uses machine learning for antibody optimization. Three were IPI companies, and only one CRP, Zephyr, focused on optimizing patient-to-drug matching.

Median Pre-Money Value by Round (n)



Top Companies by Pre-Money Valuation

| | | | |
|----------|----------|-----------|----------|
| Seed → A | (\$289M) | (\$175M) | (\$164M) |
| A → B | (\$625M) | (\$232M) | (\$226M) |
| B → C | (\$695M) | (\$538M) | (\$521M) |
| Post C | (\$1.9B) | (\$1.65B) | (1.3B) |

Of the top three companies with highest step-up multiples in each funding round in 2024 (12 deals), only four of the 12 – EvolutionaryScale, Formation Bio, Wobble Genomics, and Unlearn – secured funding in 1H 2024. This suggests that even with decreased early-stage funding in 2H 2024, investors concentrated their resources on a few high-potential companies, resulting in higher step-up multiples.

Top Series A deals led by comp bio VCs, corporates

For the top set-ups in Series A, we saw very few traditional biotech investors lead or participate in these rounds (Deerfield, RA). Instead, we noted tech or specific comp-bio focused investors, crossovers, and heavy participation by corporates, both tech (NVentures, Amazon, Hitachi) and biopharma (Eli Lilly).

¹Data from PitchBook as of 12/15/24. ¹Companies shown include only ones with reported new-round valuation on PitchBook as of 12/15/24. ¹Top Investors only include first investment into a portfolio company, not follow-on financings. Data sources: PitchBook, company websites, internal analysis.



Med Device Early-Stage: First-Financing Analysis (Seed/Series A)

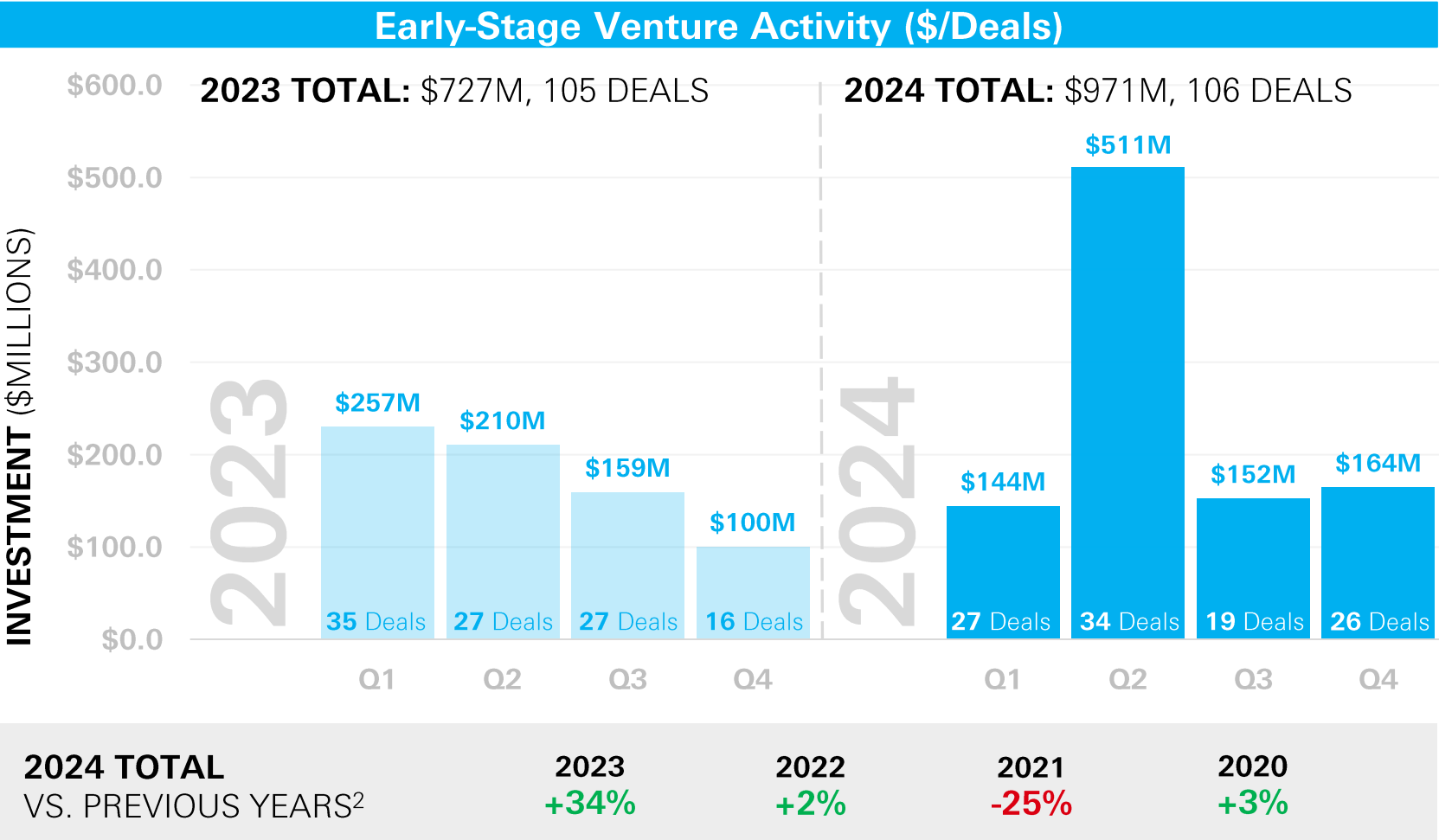
Annual 2024

Med Device First-Financing¹ Analysis

2023–2024 US & Europe



Weak 2H highlighted Series B challenges and shift toward later-stage deals



First-financing investment continued its decline through 2023, reflecting a trend that began in 2H 2022. In 2024, investment levels stabilized but quarterly activity was inconsistent. A Q2 anomaly boosted totals, driven by the three largest first-financings of 2024: Amber, Horizon, and Cradle. However, annualized 2H 2024 investment shows total funding behind 2023 and trailing the prior three years by more than 40%.

VCs shifted to later-stage investments

While Series A deals remain heavily reliant on insider-round extensions, Series B financings saw an uptick in 2024, offering relief to some early-stage companies. New investors, drawn by the lower financing risk, attractive valuations, and potential for faster exits, showed a preference for later-stage deals. Seed and Series A deals struggled to attract attention under these dynamics.

Traditional VCs complete one-off first-financings

The med device sector appears well positioned to rebound from the first-financing down cycle, supported by VCs with fresh funds raised in the past two years. However, new Series A investments are increasingly one-offs, with firms prioritizing later-stage opportunities. Notable activity came from firms such as F-Prime, NEA, Lightstone, MVM, Deerfield, Treo, Vensana, Xontogeny, Sonder, TVM, and EQT; though Hatteras was the only VC firm to complete in more than one first-financing deal in 2024.

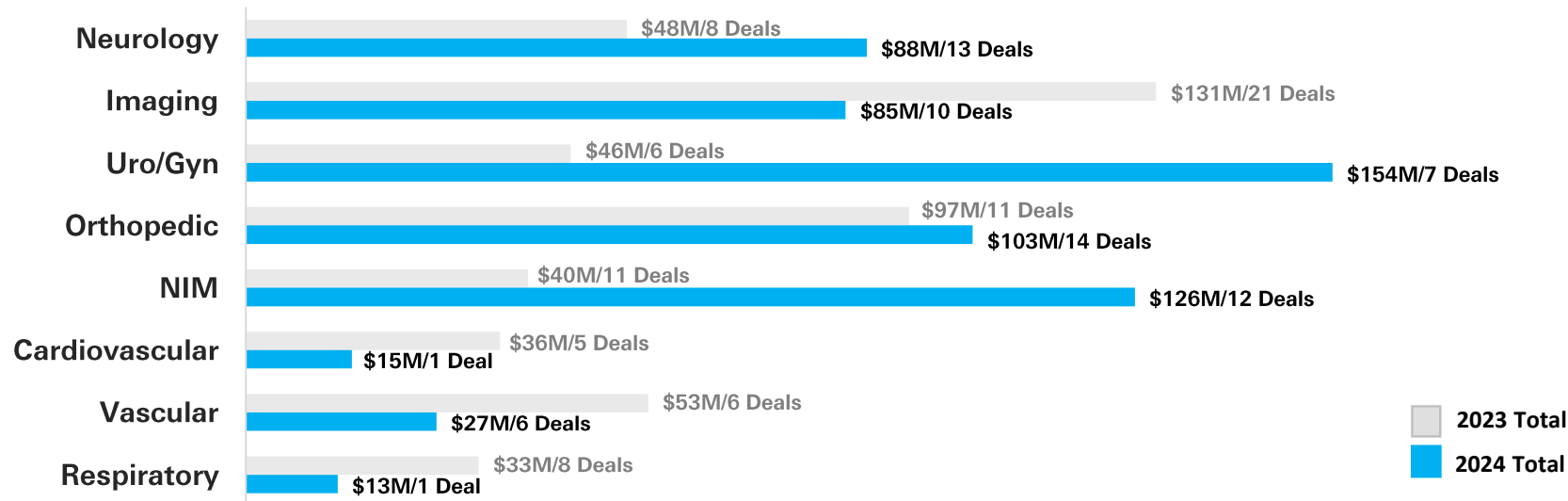
Data from PitchBook as of 12/15/24, with 12/16-12/30 estimated based on best efforts basis. Covers private, venture-backed investment. ¹First-financing defined as initial Seed or Series A financing of \$2M+. ²Using specific PitchBook search functions to approximate sector specific funding from previous years. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Med Device First-Financing¹ by Indication²

2023–2024 US & Europe



Uro/Gyn interest continued to grow; neuro and NIM exceeded 2023 investment



Uro/Gyn, neuro, and NIM attracted strong early-stage interest

Uro/Gyn maintained strong Series A interest, with annual investment increases since 2022, solidifying its position as one of the top first-financing sectors in med device. Additionally, activity in this space was noted in deals categorized under imaging and non-invasive monitoring (NIM).

Neurology reversed a four-year decline in early-stage funding, with half of the deals leveraging neurostim or brain/computer interface technologies.

NIM saw a significant resurgence, tripling investment dollars from 2023. Vital sign monitoring and neuro indications drew the highest levels of interest.

In contrast, cardiovascular investment struggled at the Seed/Series A stages, with only one first-financing deal in 2024, Meacor, for \$15M.

Numbers at a glance (ten largest first-financing deals):

Indication
 NIM 2 deals
 Uro/Gyn 2 deals

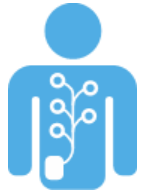
Location
 CA 4 deals
 OUS 2 deals

| | | Indication Focus | Size of Round (\$M) | Deal Date | Location | | | Indication Focus | Size of Round (\$M) | Deal Date | Location |
|---|--------------------|------------------------|---------------------|-----------|--------------|----|------------------|-----------------------|---------------------|-----------|-------------------------|
| 1 | AMBER THERAPEUTICS | Uro/Gyn Neurostim | 100 | 6/9 | London, UK | 6 | brighturo™ | Imaging Urology | 32 | 5/10 | Irvine, CA |
| 2 | Horizon | Ophthalmology Robotics | 51 | 6/4 | Malibu, CA | 7 | ico cet | Orthopedic Implant | 30 | 1/24 | Altstätten, Switzerland |
| 3 | Cradle | Surgical Regenerative | 48 | 6/5 | SF, CA | 8 | IVEAcare | Neuro Neurostim | 28 | 1/24 | Minneapolis, MN |
| 4 | Alle Health | NIM Metabolic | 36 | 4/6 | USA | 9 | ECM Therapeutics | Regenerative Hydrogel | 26 | 5/30 | Warrendale, PA |
| 5 | COACHCARE | NIM Vital Signs | 32 | 6/13 | New York, NY | 10 | novocuff | Uro/Gyn Neonatal | 26 | 7/17 | Mountain View, CA |

Data from PitchBook through 12/15/24. Covers private, venture-backed investment. ¹First-financing defined as initial Seed or Series A financing of \$2M+. ²Indication defined as the central focus of the company. If NIM or Imaging company, that indication bucket supersedes the underlying focus. ³Originally announced in prior years. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Med Device Valuation¹ Analysis

2023–2024 US & Europe



Series A extensions led high pre-money values, driven by SaaS and neuro

| Stage | Deals with Valuations ¹ versus Total Activity | Median Round Size | Pre-Money Valuation (by Percentile) in 2024 | |
|-----------------|---|------------------------------|--|--------------|
| Angel / Seed | 7 of 31 | \$4M \$5M (2023) | 50th Pct | \$6M |
| Series A <\$15M | 19 of 46 | \$6M \$4M (2023) | 25th Pct | \$8M |
| | | | 50th Pct | \$16M |
| | | | 75th Pct | \$34M |
| Series A >\$15M | 16 of 28 | \$23M \$25M (2023) | 25th Pct | \$17M |
| | | | 50th Pct | \$26M |
| | | | 75th Pct | \$37M |

SaaS and Series A extensions highlight smaller <\$15M Seed and Series A deals

Smaller Seed and Series A deals, particularly SaaS-based companies, commanded higher pre-money valuations, with four of the top five in NIM and imaging solutions (Dynocardia, BrainTemp, CairnSurgical, and Sonavex), all with pre-money valuations higher than \$30M.

Notably, four of the top six pre-money valuations in smaller Series A deals were Series A extensions, underscoring the challenge of finding new Series B lead investors.

Larger Series A pre-money values across indications

Neurostim and brain/computer interface technologies continue to attract high pre-money valuations for Series A deals, including Paradromics (\$250M pre-money), Invicta (\$50M pre-money), and Otolith (\$46M pre-money), all of which were Series A extensions.

Orthopedic and NIM technologies both saw multiple financings with \$70M+ pre-money valuations, including orthopedic deals Icotec and Cionic and NIM deals Allez Health and Dynocardia. Two of these four deals were Series A extensions.

Data from PitchBook as of 12/15/24. Covers private, venture-backed investment. ¹Valuation refers to companies that had valuation information per PitchBook. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

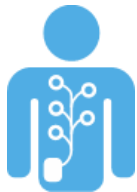


Med Device Investment: All Venture Deals

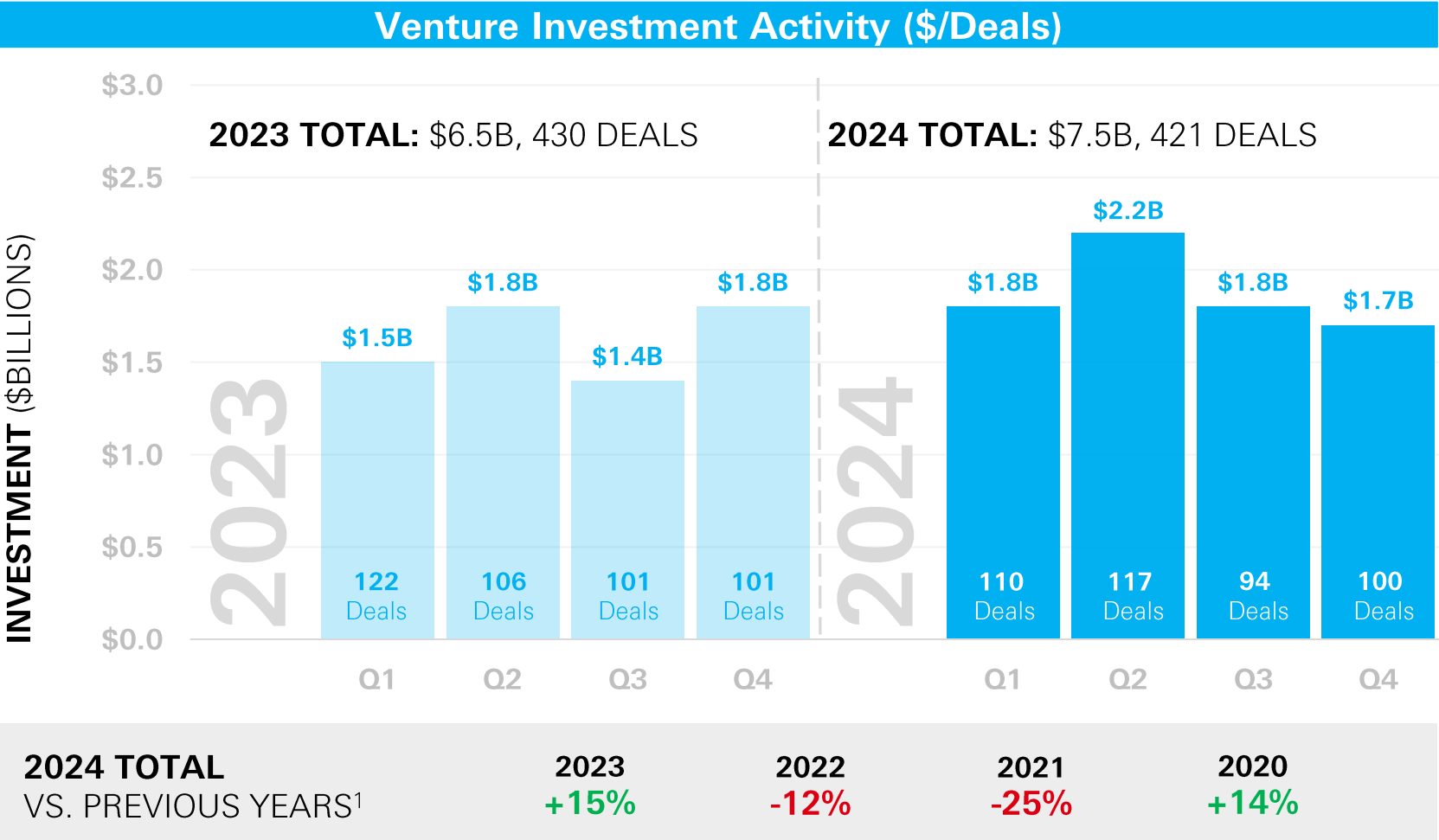
Annual 2024

Med Device Analysis (All Deals)

2023–2024 US & Europe



Med device investment remained stable amid first-financing decline



Despite a decline in first-financing, med device investment demonstrated stability, maintaining consistent deal flow and funding levels compared with prior years. Predictions that most insider-round companies would close new investor-led rounds did not hold, with many closing insider extensions instead. However, the unexpected surge in new investor-led, later-stage financing highlighted the ongoing disparity between “haves” and “have nots.” The top 10% of med device financings attracted 60% of all investment dollars, the highest percentage among all sectors.

Strong mix of capital sources drove later-stage financing
In 2024, later-stage med device deals were backed by a wide range of capital sources, including traditional VC, growth, PE, and crossover investors. Additionally, corporates from pharma, diagnostics, and med tech returned to the med device market, funding both larger and smaller deals. This diversity represents the most varied funding sources for med device in a decade – a positive sign for the sector.

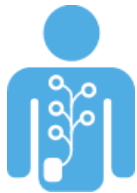
The 20 largest financings in 2024 supported both commercial and development-stage projects. Eleven deals focused on commercial 510(k) products, two funded commercial PMA/De Novo deals, and seven were pre-commercial financings, including three development-stage PMA and four PMA pivotal trials.

Series B deals find new investors, many step-ups
Series B funding, typically challenging to secure, particularly for PMA projects, closed 47 financings in 2024. Among the 27 deals with valuation data, 15 were up rounds, seven were flat, and only four were down rounds.

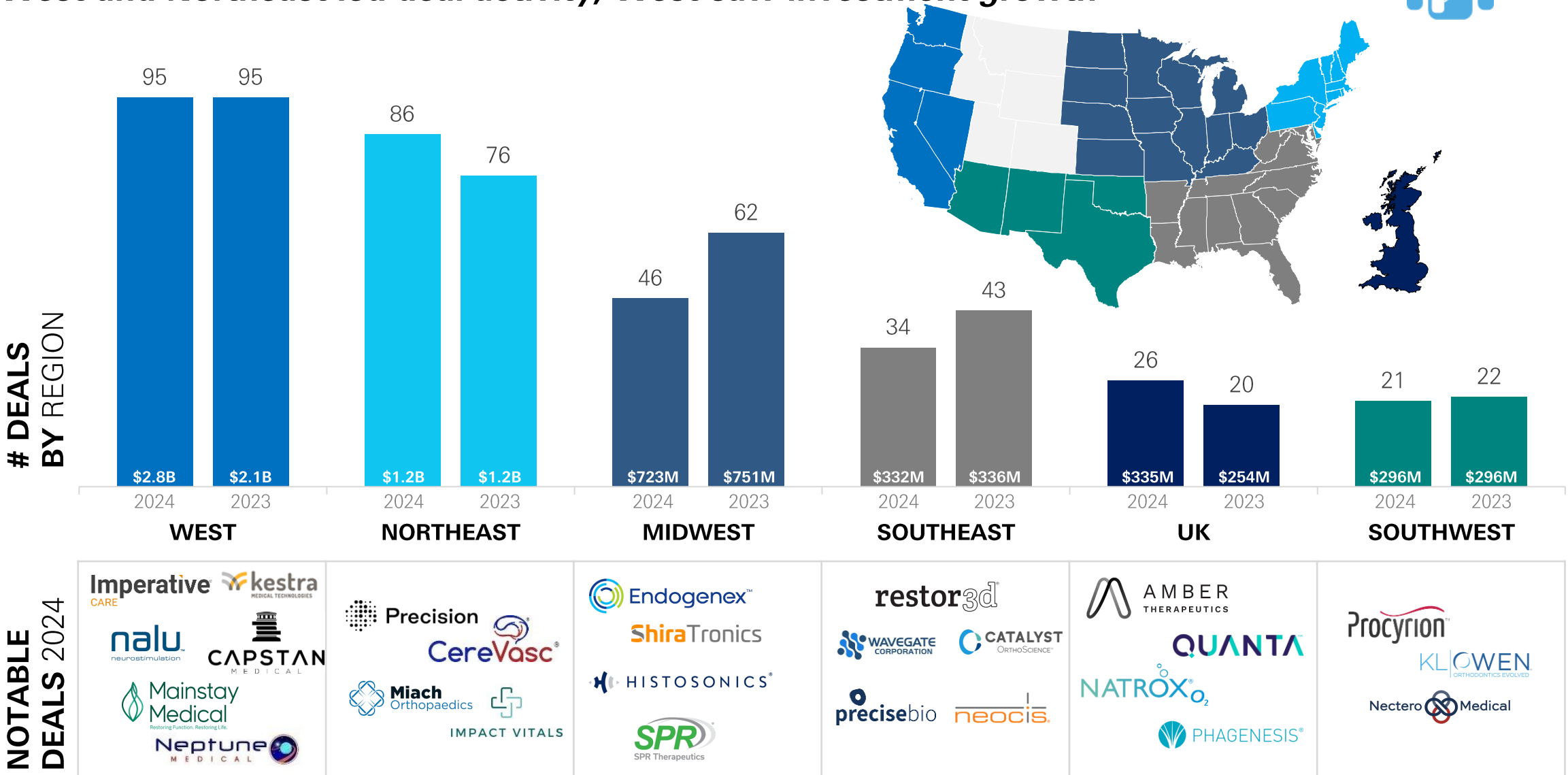
Data from PitchBook as of 12/15/24, with 12/16-12/30 estimated based on best efforts basis. Covers private, venture-backed investment. ¹Using specific PitchBook search functions to approximate sector specific funding from previous years. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Med Device Deal Activity by Region

2023–2024 US & Europe

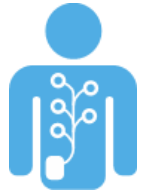


West and Northeast led deal activity; West saw investment growth

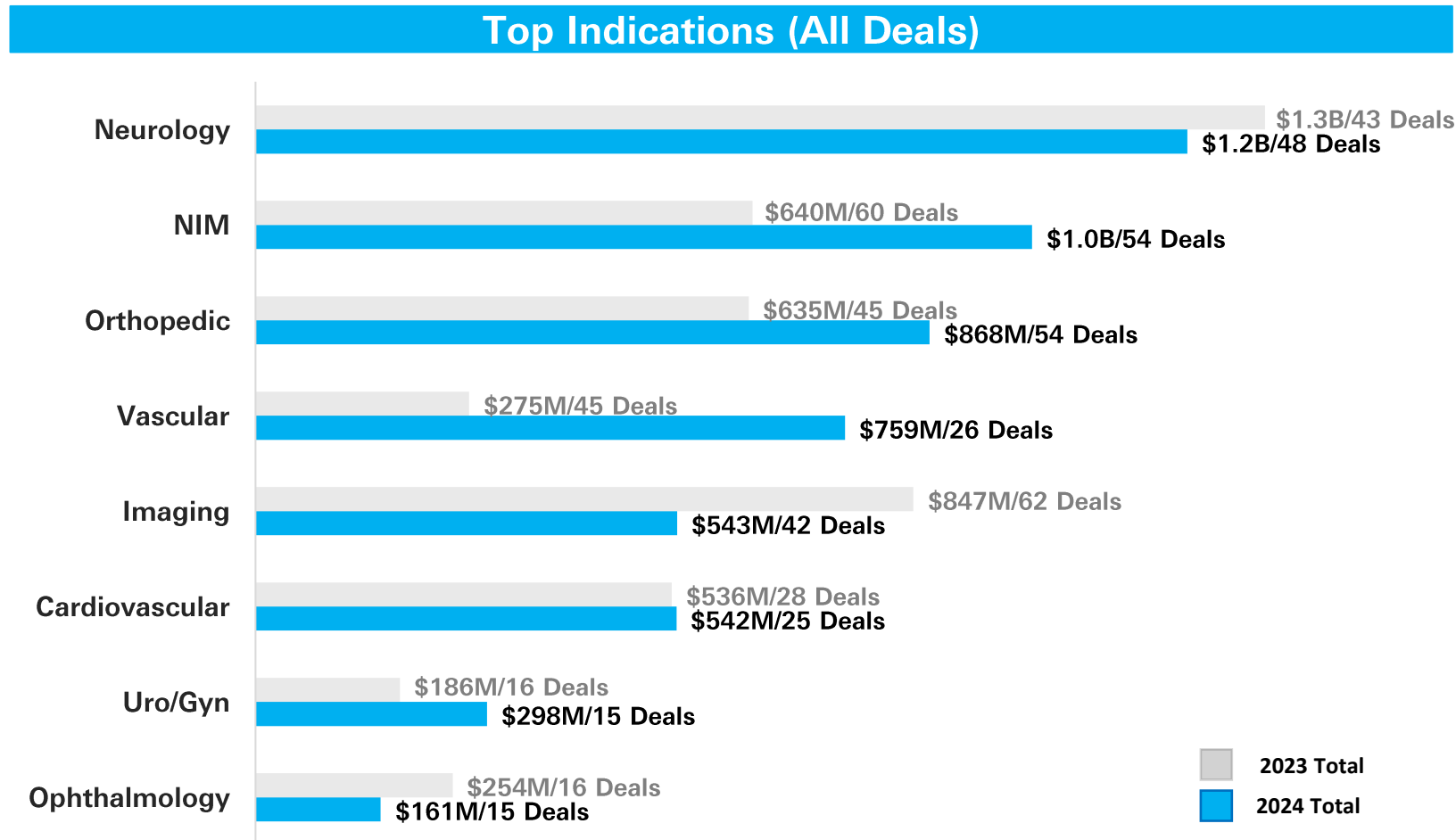


Med Device Investment by Indication¹

2023–2024 US & Europe



NIM, orthopedic, vascular attracted investment; neuro, cardio remained stable



Neuro leads investment; NIM, ortho and vascular up

Neuro maintained its leadership in med device investment in 2024, with brain/computer interface technologies (Blackrock, Precision, and INBRAIN) securing three of the top eight largest neuro financings. Neurostim technologies dominated, featuring in 21 of 46 deals, led by Nalu, SPR, ShiraTronics, and Cala Health. Despite strong investment, neurology saw more flat and down rounds (eleven combined) than up rounds (five).

NIM rebounded strongly, surpassing \$1B investment in 2024. Cardiovascular and metabolic secured 11 NIM deals each, followed by six deals in vital sign monitoring and uro/gyn.

Vascular and orthopedics investment also grew. Orthopedics deals focused on both implant technologies (19 deals) and surgical robotics (seven deals), while vascular financing included five \$50M+ deals: two for commercial 510(k) products and three in clinical stages (one in development and two pivotal).

Imaging investment declines

Imaging investment has experienced significant annual fluctuations, ranging between \$500M and \$1B a year since 2020. With a crowded market and limited acquirers, the focus in imaging has shifted to technologies that enhance therapy planning and guidance. In 2024, oncology and cardiovascular were the leading areas for imaging investments.

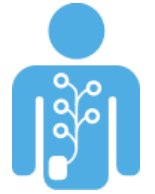
Cardiovascular remained stable

Cardiovascular investment in 2024 remained steady compared to 2023 but was down 15-20% from 2020-2022 levels. There were seven deals exceeding \$40M, including four in development or feasibility trials, two in pivotal trials, and one commercial-stage deal.

Data from PitchBook through 12/15/24. Covers private, venture-backed investment. ¹Indication defined as the central focus of the company. If NIM or Imaging company, that indication bucket supersedes the underlying focus. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Med Device Largest Investment in 2024

2024 US & Europe



Commercial stage dominated largest med device deals in 2024

LARGEST MED DEVICE INVESTMENTS IN 2024

| | | Indication Focus | Size of Round/ (\$M) Step-up? ¹ | Date/ Round | Location | | Indication Focus | Size of Round/ (\$M) Step-up? ¹ | Date/ Round | Location | |
|---|---|----------------------|--|-----------------|--------------------|----|---|--|-------------|----------|----------------|
| 1 |  | Neuro Brain/Comp | 200 | 4/29 D | Salt Lake City, UT | 6 |  | Cardiovascular Structural Heart | 110 | 12/11 C | Santa Cruz, CA |
| 2 |  | NIM Cardiovascular | 190 | 7/15 N/A | Kirkland, WA | 7 |  | Surgical Robotic | 110 | 2/21 C | Pisa, Italy |
| 3 |  | Vascular Stroke | 150 | 7/25 E | Campbell, CA | 8 |  | Surgical Ablation | 102 | 9/15 D | Plymouth, MN |
| 4 |  | Orthopedic Neurostim | 135 | 2/26 Late Stage | San Diego, CA | 9 |  | Uro/Gyn Neurostim | 100 | 6/9 A | London, UK |
| 5 |  | Neuro Neurostim | 115 | 10/9 E | Carlsbad, CA | 10 |  | Surgical Robotic | 97 | 4/2 D | Burlingame, CA |

Valuation¹

Step-Up

Flat Rd

Step-Down

Valuation¹ ■ Step-Up ■ Flat Rd ■ Step-Down

Seven of the 10 largest med device deals in 2024 were commercial stage, including five 510(k) deals and two PMA/De Novo financings. The remaining pre-commercial deals were PMA-focused, comprising two development stage deals and one pivotal trial funding targeting different indications.

Notably, corporate investors joined as new syndicate members in four of these ten deals.

Interestingly, there is growing investor interest in pivotal trial funding for both cardiovascular and urology indications.

Numbers at a glance (10 largest deals)

Indication
Surgical 3 deals
Neuro 2 deals

Location
California 5 deals
OUS 2 deals

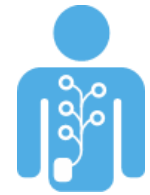
Lookback: 2022 largest private financings revealed mixed outcomes through 2024

The 11 largest med device financings from 2022 delivered mixed results, with only one exit. Ceribell achieved a successful IPO, while Nalu and Histosonics secured significant financings at flat and up rounds, respectively. Among the others, three deals raised inside rounds, two turned to debt, two had no announced financings, and one underwent a forced merger/consolidation.

Data from PitchBook though 12/15/24. Covers private, venture-backed investment. ¹Step-up analysis uses PB supplied valuations if available. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Med Device Most Active Investors¹

2024 US & Europe



Traditional VCs led multiple deals, as growth investors saw expanded involvement

ALL DEALS

| Angel/VC | Corporate ³ | Growth ² |
|---|---|--|
| <p>3</p> <p>DEERFIELD</p> <p>THORNAPPLE RIVER</p> <p>bpifrance</p> <p>SHANGHAI CAPITAL</p> <p>SV</p> <p>EQT Life Sciences</p> <p>SBXi</p> <p>VENSANA CAPITAL</p> <p>NORWEST</p> <p>novo holdings</p> <p>KURELSU</p> <p>FORUM</p> | <p>4</p> <p>Johnson & Johnson</p> | <p>3</p> <p>Cormorant Asset Management</p> <p>SECTORAL ASSET MANAGEMENT</p> <p>MAVEN CAPITAL PARTNERS</p> <p>UI investissement</p> |
| <p>2</p> <p>Arboretum VENTURES</p> <p>Ben Franklin Technology Partners</p> <p>Cléry</p> <p>TVM Capital</p> <p>EARLYBIRD</p> <p>Berkeley Catalyst Fund</p> <p>Device of Tomorrow Capital</p> <p>GENHENN CAPITAL</p> <p>PEGASUS TECHNOLOGY</p> <p>Cadence</p> <p>ECN JORA</p> <p>WARREN POINT CAPITAL</p> <p>Avestria</p> <p>Calm Ventures</p> <p>European Innovation Council</p> | <p>3</p> <p>INTUITIVE</p> <p>OLYMPUS</p> | <p>2</p> <p>Amzak Health</p> <p>Ally Bridge Group</p> |
| <p>GOOD GROWTH CAPITAL</p> <p>MARCH OF DIMES</p> <p>OMEGA FUNDS</p> <p>YZR</p> <p>HATTERAS VENTURE PARTNERS</p> <p>MIRAE ASSET Capital</p> <p>PUMA VENTURE CAPITAL</p> <p>Unorthodox Ventures</p> <p>IMPACTASSETS</p> <p>New Day Venture Capital</p> <p>treoventures</p> <p>RCCAPITAL</p> <p>relyens</p> <p>GEASIDE</p> | <p>2</p> <p>Laborie⁷ FOR DIGNITY. FOR LIFE.</p> <p>OHC OSANG HEALTHCARE</p> <p>zynext Ventures</p> <p>THE UNIVERSITY of EDINBURGH</p> <p>Old College Capital</p> | |

Data from PitchBook as of 12/15/24. Covers private, venture-backed investment. ¹Most Active Investors only include first investment into a new portfolio company, not follow-on financings. ²Growth Investors defined as investment firms that typically invest in later-stage companies that either are revenue scaling, or the round is anticipated to be the last before an IPO. ³Note that families of funds are combined for this slide, as are corporate and corporate venture with the same parent. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Med Device Valuation¹ Analysis

2023–2024 US & Europe



Flat and down rounds dominated late stage; Series B valuation concerns grew

| Stage | Deals with Valuations ¹ versus Total Activity | Median Round Size | Up Round ² Percentage | Pre-Money Valuation (by Percentile) in 2024 | |
|--------------------|---|-----------------------|------------------------------------|--|--------|
| Series B <\$40M | 18 of 33 | \$14M \$15M (2023) | 67% (12/18) 68% (17/25 in 2023) | 25th Pct | \$39M |
| | | | | 50th Pct | \$66M |
| | | | | 75th Pct | \$95M |
| Series B >\$40M | 9 of 14 | \$57M \$41M (2023) | 44% (4/9) 33% (1/3 for 2023) | 25th Pct | \$56M |
| | | | | 50th Pct | \$58M |
| | | | | 75th Pct | \$74M |
| Series C | 16 of 27 | \$39M \$23M (2023) | 44% (7/16) 67% (12/18 in 2023) | 25th Pct | \$52M |
| | | | | 50th Pct | \$73M |
| | | | | 75th Pct | \$132M |
| Series D+ | 14 of 25 | \$65M \$46M (2023) | 21% (3/14) 61% (11/18 in 2023) | 25th Pct | \$95M |
| | | | | 50th Pct | \$190M |
| | | | | 75th Pct | \$251M |

While 2024 saw an increase in new investor-led rounds, the number of up rounds declined, particularly in Series C and later, where 20 of 30 deals with valuation information secured flat or down rounds.

Large Series B valuations misaligned with M&A trends

In 2024, three Series B pre-money valuations exceeded \$120M: Casana (NIM, cardiovascular), Third Pole (Series B extension, respiratory), and Amplitude Vascular (Series B extension, vascular). Additionally, seven other Series B pre-money valuations surpassed \$100M. Four of the seven were Series B extensions.

However, with M&A up-front deal medians under \$300M, the ability of these deals to deliver strong M&A returns remains uncertain, raising the possibility that many of these deals had structure inducements for new investors.

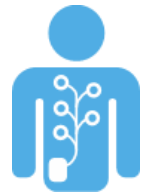
Top Series C valuations in neuro, orthopedic, and surgical

Six deals achieved pre-money valuations of \$100M or more, with five of six being step-ups. There were two neuro deals (Precision with a step-up of 2.6x, Noctrix at 2.4x), and one each in imaging (Promaxo at 1.8x), orthopedic (Carlsmed at 1.6x), dermatology (CUTISS at 1.2x), and cardiovascular (Adona Medical at 1.3x).

Data from PitchBook as of 12/15/24. Covers private, venture-backed investment. ¹Valuation refers to companies that had valuation information per PitchBook. ²Up round refer to companies that had valuation information available for both the new and last financing, with the new round pre-money greater than the last round post-money. Up round calculated using Pitchbook valuation data: Divide new pre-money valuation by previous round post-money valuation – if greater than one, deal is labeled as an up round. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Med Device Largest Post-Money¹ Values

2024 US & Europe



510(k) revenue-stage companies dominated list; VC and Corporate remained active

LARGEST POST-MONEY VALUATION BY MED DEVICE INDICATION

| Indication | Company | Date | Deal Size (\$M) | Round | Post \$ (\$M)/ Step-up? ² | Stage | Notable/Lead New Investor(s) |
|---------------------------|--------------------------|-------|-----------------|-------|---|----------------------|---------------------------------|
| NIM Sleep/Fertility | ŌURA | 11/19 | 75 | D | 5,000 | Commercial 510(k) | Corporate |
| Vascular Stroke | Imperative CARE | 7/25 | 150 | E | 1,650 | Commercial 510(k) | Growth, VC, Corporate |
| Surgical Ablation | HISTOSONICS [®] | 8/15 | 102 | D | 610 | Commercial 510(k) | Growth, VC |
| Neuro Brain/Computer | Precision | 10/17 | 93 | C | 505 | Pivotal Trial | Hedge, VC |
| Neuro Neurostim | nalu neurostimulation | 10/9 | 115 | E | 390 | Commercial 510(k) | Growth, VC |
| NIM Cardiovascular | casana | 1/2 | 40 | B | 340 | Commercial 510(k) | Corporate, VC |
| Dental Robotics | neocis | 1/10 | 60 | D | 311 | Commercial 510(k) | Corporate, VC |
| Imaging Cardiovascular | IONETIX | 8/7 | Unknown | Later | 300 | Commercial 510(k) | Unknown |

Valuation²

Step-Up Flat Rd Step-Down

Post-money median increased

The median post-money for the eight highest-valued companies increased slightly from 2023 but remained well below 2022 levels. Notably, five of these eight largest post-money deals in 2024 secured strong up round support.

Commercial rounds dominated valuations

Commercial-stage rounds commanded the highest valuations in 2024, a shift from 2023 when half the top eight deals were still in clinical trials. The sustainability of these valuations will depend on the revenue growth and their performances in M&A or IPO markets over the next few years.

Corporate support for later-stage grew

Corporate investors participated in half of the top-valued deals in 2024, reflecting strong interest in supporting commercial growth. Corporates are more willing to assume the dual risk of clinical and reimbursement challenges when the product aligns with their domain expertise. Notably, in med device since 2018, M&A by a corporate that was also an equity investor yielded the highest percentage (15%) among healthcare sectors.

2022 update: the top seven post-money review highlights an exit, financing, and mergers

The top seven highest-valued companies from 2022 delivered mixed outcomes. Kerecis achieved a significant exit with its acquisition by Coloplast for up to \$1.3B. Athelas and Bioformis completed non-exit mergers, while Reflexion and Distalmotion secured large private financings. The remaining two companies closed debt transactions.

Data from PitchBook as of 12/15/24. Covers private, venture-backed investment. ¹Financing data based on information available from PitchBook, including post-money values and step-up, flat and down round calculations. ²Step-Ups calculated using Pitchbook valuation data for previous and new financing as follows: Divide new pre-money valuation by previous round post-money valuation. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

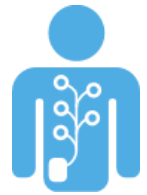


Med Device Investment: Private Exit Analysis

Annual 2024

Med Device Private VC-Backed M&A¹ by Indication

2018–2024



After a weak 1H 2024, Edwards, Stryker spurred Q3 M&A rally; Ceribell IPO shined

M&A MEDIAN DEAL VALUES

| Date | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---------------------|------|------|------|------|------|------|------|
| Deals | 20 | 17 | 16 | 23 | 10 | 9 | 14 |
| Up-Front (\$M) | 195 | 120 | 132 | 250 | 138 | 400 | 288 |
| Milestone TBE (\$M) | 43 | 35 | 100 | --- | 130 | 120 | 63 |
| Total Deal (\$M) | 223 | 220 | 223 | 300 | 255 | 600 | 338 |

NOTABLE 2024 M&A DEALS

| | | | | | |
|---|---|---|---|---|---|
|  | → |  |  | → |  |
|  | → |  |  | → |  |
|  | → |  |  | → |  |
|  | → |  |  | → |  |
|  | → |  |  | → |  |
|  | → |  |  | → |  |
|  | → |  |  | → |  |

2024 IPO: ceribell 10/11/24 \$180M Raised; massively oversubscribed, post-IPO up 47% as of 12/31. The IPO pre-money was a 1.3x step-up from last private round. Revenue profile: \$45M revenues FY 2023; \$30M revenues in first six months of 2024.

Q3 M&A rally

High-value 2023 exits fueled optimism for future M&A and encouraged investors to invest in new deals in 2024. However, exits in 1H 2024 were slow, with only three exits. In Q3, we noted a significant uptick in M&A with nine deals, including three led by Edwards. There were 14 venture-backed M&A deals in 2024, the highest since 2021.

An IPO highlights Q4

While Q4 saw limited private M&A activity with only two deals, it marked the year's first med device IPO. Ceribell (NIM, neuro) raised \$180M in IPO proceeds at a pre-money step-up from its last private round and has since traded to nearly 2x its IPO post-money value, generating public market excitement for 2025. However, revenue predictability and achieving profitability on IPO proceeds remain critical factors for future IPO candidates.

Private M&A time to exit raises concern

The median time to exit from first-financing increased to 11.9 years in 2024, more than double 2021's 5.8-year median. This extended timeline may be contributing to the decline in first-financing.

2024 top M&A by indication

Cardiovascular 5 deals Med Upfront: \$500M
Orthopedic 2 deals Med Upfront: \$415M

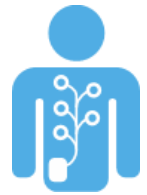
Top acquirers

Edwards and Stryker drove M&A momentum in 2024 with three deals each, while Hologic completed two. Looking ahead, there is optimism that Medtronic, Boston Scientific, and J&J will become more active.

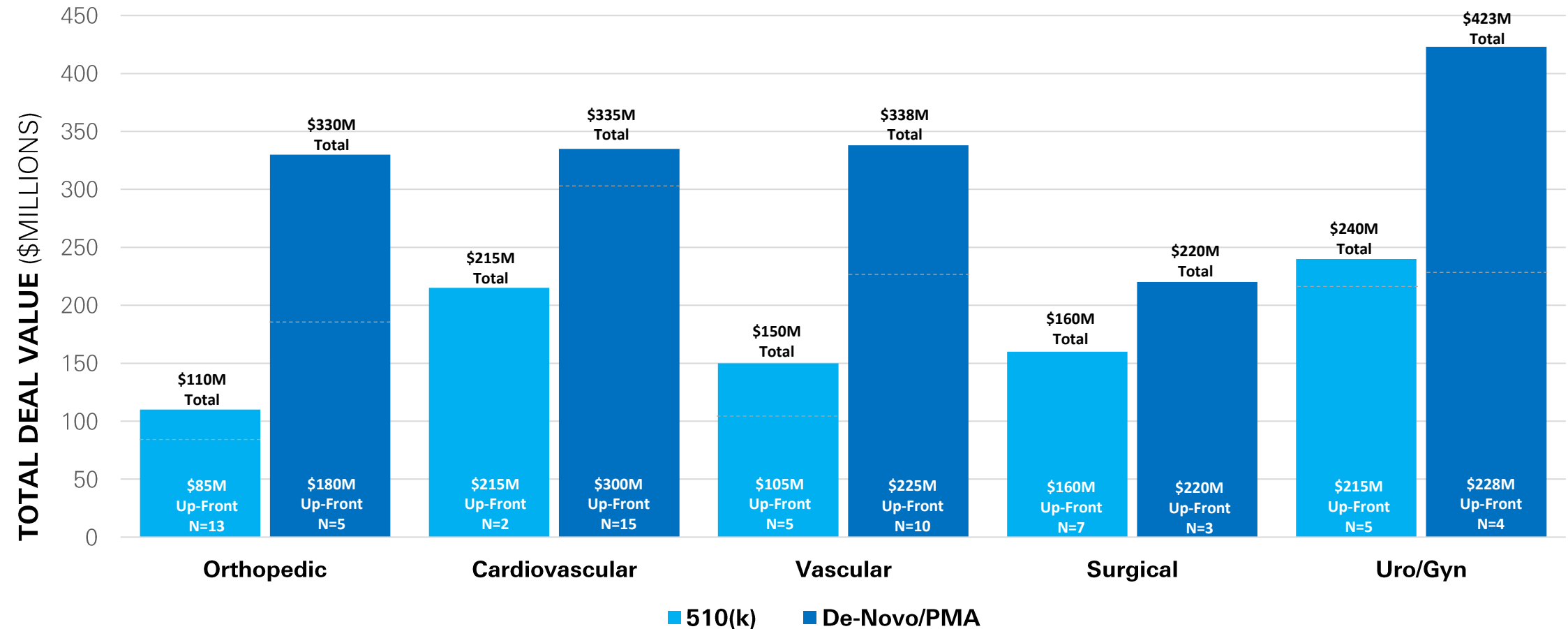
¹Med Device M&A defined as private, venture-backed M&A with an upfront payment of at least \$50M, calculated on a best-efforts basis. Data sources: PitchBook, public news articles and conversations with investors and companies

Med Device Private M&A by Indication¹, Pathway

2018–2024



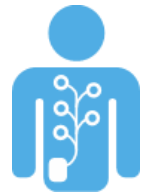
Seven-year Median Up-Front and Total Deal Values in Most Active Indications



¹Biopharma M&A defined as private, venture-backed M&A with an upfront payment of at least \$50M, calculated on a best-efforts basis. ¹Indication defined as the central focus of the company. If NIM or Imaging company, that indication bucket supersedes the underlying focus. Data sources: PitchBook, public news articles and conversations with investors and companies. Thanks to Mind Machine for slide strategy, creative, and design.

Med Device Private VC-Backed M&A¹ by Pathway

2018–2024



PMA deal value increased; 510(k) tended to commercial stage at lower values

PMA M&A MEDIAN VALUES

| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|--|------|------|------|------|------|------|------|
| # of Deals | 7 | 5 | 7 | 10 | 4 | 6 | 4 |
| Commercial Stage/ Development Stage | 2/5 | 2/3 | 1/6 | 5/5 | 0/4 | 5/1 | 1/3 |
| Up-Front (\$M) | 215 | 210 | 118 | 275 | 268 | 328 | 550 |
| Milestone TBE (\$M) | 0 | 0 | 100 | 18 | 238 | 158 | 260 |
| Total Deal (\$M) | 220 | 300 | 220 | 300 | 725 | 625 | 810 |
| Invested Capital (\$M) | 30 | 97 | 16 | 63 | 55 | 72 | 134 |
| Time to Exit (Years) | 6.7 | 13.9 | 3.4 | 7.6 | 6.8 | 9.8 | 13.8 |

510(k) M&A MEDIAN VALUES

| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|--|------|------|------|------|------|------|------|
| # of Deals | 9 | 12 | 7 | 12 | 5 | 3 | 10 |
| Commercial Stage/ Development Stage | 9/0 | 11/1 | 5/2 | 12/0 | 5/0 | 3/0 | 10/0 |
| Up-Front (\$M) | 135 | 104 | 80 | 188 | 132 | 400 | 254 |
| Milestone TBE (\$M) | 50 | 38 | 40 | 0 | 110 | 100 | 0 |
| Total Deal (\$M) | 200 | 165 | 200 | 200 | 250 | 400 | 293 |
| Invested Capital (\$M) | 41 | 23 | 26 | 39 | 8 | 146 | 57 |
| Time to Exit (Years) | 8.1 | 7.2 | 7.8 | 5.3 | 8.2 | 8.8 | 11.1 |

PMA deals typically sold before approval; deal value scaled in 2023 and 2024

In PMA-focused companies, most exits (27 of 43) occurred before FDA approval, as acquirers acted quickly for large-market opportunities, often acquiring based on pivotal data. While median exit values have reached record highs, so has invested capital needed to achieve an exit. Thoughtful financing plans and exit optionality are critically important: companies must approach mezzanine rounds carefully, as high valuations and public-minded mezzanine investors can create pressure to pursue an IPO in an uncertain market and can significantly impact M&A returns.

PMA: median up-front divided by capital invested
2023: 4.6x 2024: 4.1x

510(k) companies required commercial scale, which leads to longer exit times

Over the past three years, all 17 venture-backed 510(k) exits were for FDA-cleared, revenue-generating products. While deal values have been inconsistent, the last two years saw the highest up-front and total deal values in seven years. However, time to exit and capital invested have increased, likely due to the challenging IPO market and acquirers requiring both higher revenue numbers and a clearer path to profitability.

510(k): Median up-front divided by capital invested
2023: 2.7x 2024: 3.7x

¹Med Device M&A defined as private, venture-backed M&A with an upfront payment of at least \$50M. Note 3 De Novo deals in 2018 and 1 in 2020 not included in this specific analysis. Data sources: PitchBook, public news articles and conversations with investors and companies.

Healthtech Early-Stage: First-Financing Analysis (Seed/Series A)

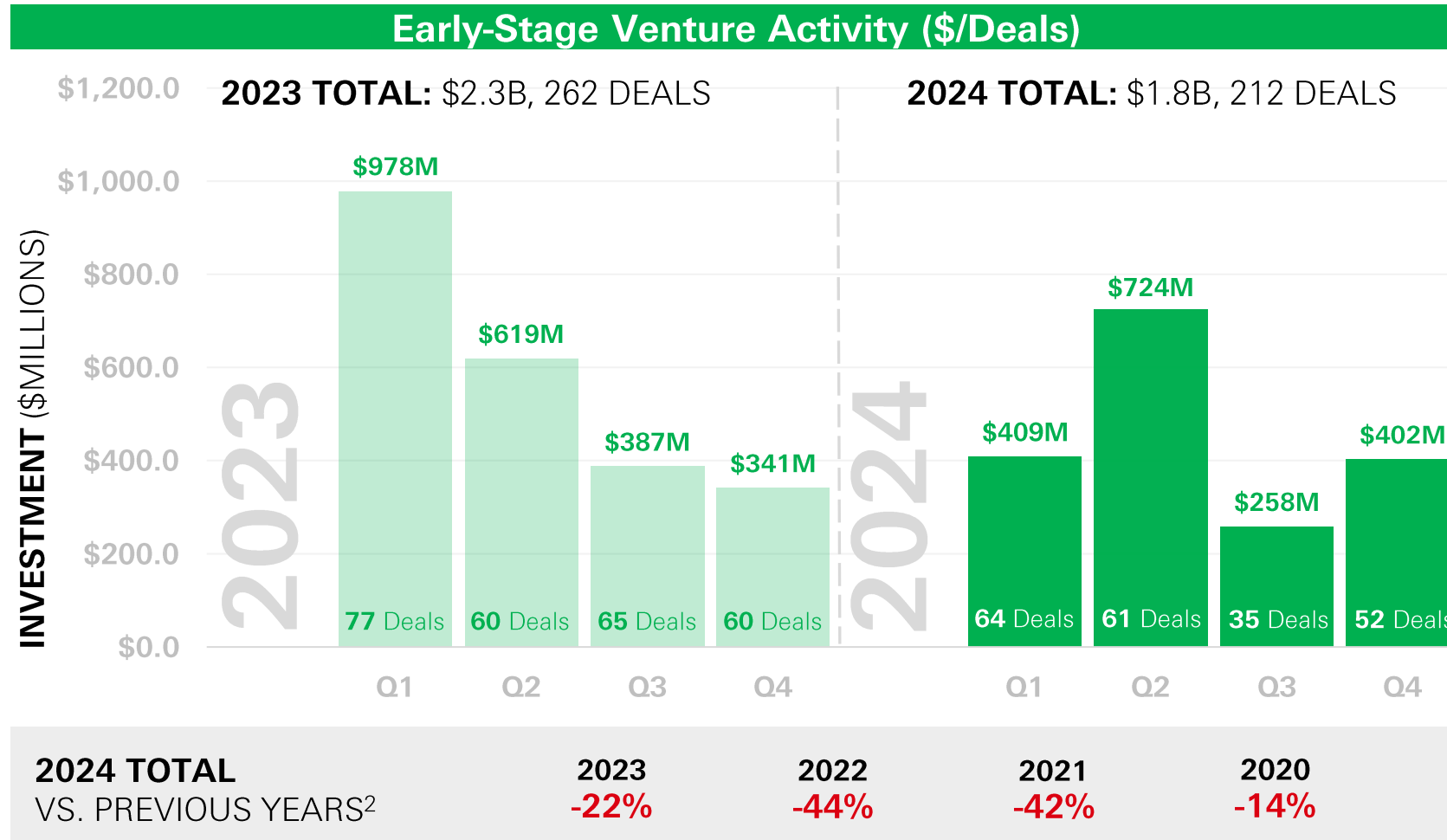
Annual 2024

Healthtech First-Financing¹ Analysis

2023–2024 US & Europe



Larger deals declined, Series A deal investments stabilized



2024 first-financing normalization with fewer big deals

The dollars and deals in 2024 indicate a return to normalcy after a surge in early-stage financing during 2021–2022, fueled by tourist investors and inflated valuations. While 2023 began strong with a focus on early-stage investments, activity weakened each quarter, ending the year poorly. In 2024, quarterly numbers were mixed but showed a positive trend with increased investment compared to 2H 2023.

However, the number of large first financings (>\$50M) decreased from nine in 2023 to only five in 2024, reflecting fewer larger syndicate-led deals.

Focus on AI and large underserved populations

AI attracted significant investment in 2024, with over 80 deals and \$680M invested. Key AI innovations focused on reducing provider administrative burdens, optimized workflows, and enabling predictive analytics in clinical trials. Notable deals included Pi Health (\$72M), Advanced Medicine Partners (\$60M), and Humata Health (\$25M).

Investments in companies addressing underserved populations also increased, with four of the top 10 largest first-financings targeting senior care companies (e.g., Tuesday Health and Habitat Health) and two focusing on women's health (LunaYou and Axena Health).

Healthtech defined as companies or product/solutions that help in delivering care, helping doctors or other forms of medical solution deliver care, or helping the broader ecosystem deliver care. Data from PitchBook as of 12/15/24, with 12/16-12/30 estimated based on best efforts basis. Covers private, venture-backed investment. ¹First-financing defined as initial Seed or Series A financing of \$2M+. ²Using specific PitchBook search functions to approximate sector specific funding from previous years. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.



Valuations stabilized as larger Series A deals saw pre-money grow

| Stage | Deals with Valuations ¹ versus Total Activity | Median Round Size | Pre-Money Valuation (by Percentile) in 2024 | |
|-----------------|---|-----------------------|--|--------|
| Angel / Seed | 25 of 79 | \$5M \$4M (2023) | 25th Pct | \$6M |
| | | | 50th Pct | \$9M |
| | | | 75th Pct | \$12M |
| Series A <\$11M | 32 of 73 | \$6M \$6M (2023) | 25th Pct | \$12M |
| | | | 50th Pct | \$20M |
| | | | 75th Pct | \$35M |
| Series A >\$11M | 51 of 85 | \$19M \$20M (2023) | 25th Pct | \$32M |
| | | | 50th Pct | \$46M |
| | | | 75th Pct | \$106M |

Down rounds in 2024 stabilized early-stage pre-money valuations

In 2024, a wave of publicly disclosed down rounds emerged as companies that relied on inside rounds in 2022 and 2023 returned to the market to attract new investors. This trend was anticipated, as most companies either adjusted to more appropriate valuations or, in rare cases, grew into their prior valuations. This activity helped stabilize valuations with investors, who are emphasizing strong business fundamentals (smart growth and path to profitability). Pre-money valuations for both Seed and smaller Series A deals remained largely unchanged from 2023 levels.

Large Series A fundings grew as syndicates mitigated Series B risk

Large Series A fundings continued across healthcare sectors in 2024, as multi-investor syndicates helped to reduce Series B financing risk. Healthtech saw notable pre-money increases in larger Series A deals, with 75th percentile pre-money valuation rising by 65% over 2023, from \$60M to \$106M. The highest pre-money Series A valuations were led by wellness and education companies, including Hippocratic AI (\$410M pre-money), Levels (\$266M pre-money) and Oxefit (\$207M pre-money), as well as provider ops companies, such as Diverge Health (\$523M pre-money), and Fabric (\$310M pre-money). While technically Series A deals, all five of these companies had previously raised significant equity funding.

Healthtech defined as companies or product/solutions that help in delivering care, helping doctors or other forms of medical solution deliver care, or helping the broader ecosystem deliver care. Data from PitchBook as of 12/15/24. Covers private, venture-backed investment. ¹Valuation refers to companies that had valuation information per PitchBook. Data sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative, and design.

Healthtech Investment: All Venture Deals

Annual 2024



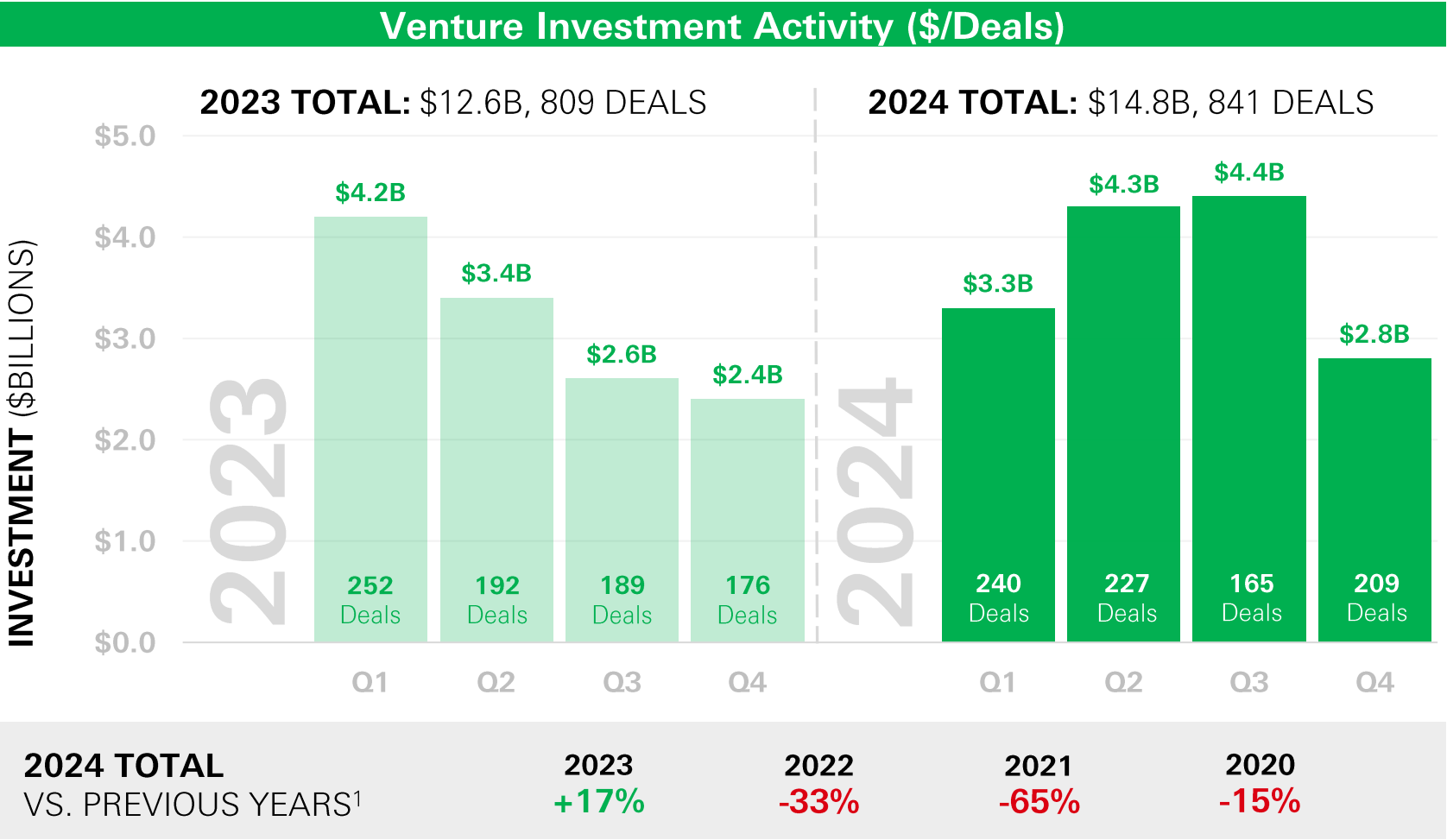
HSBC Innovation Banking

Healthtech VC Investment (All Deals)

2023–2024 US & Europe



2024 signals recovery and market normalization for the healthtech sector



Investment rebounded in 2024

After the challenges of 2023, marked by inside rounds, valuation resets, and the banking crisis, 2024 showed recovery, stabilizing near 2020 levels. Investor activity surged, particularly in mid-to-later-stage companies, with 58% of post-first financing deals featuring an outside lead investor, up from 49% in 2023. Investment volume also gained positive momentum, reflecting improved financing trends. Fewer insider and unlabeled rounds, combined with larger investments in mature companies, indicate a return to a more normalized market.

Later-stage rounds regained momentum; clinical AI emerged as a key theme

The number of large deals (\$100M–\$200M) increased to 19 in 2024, up from 15 in 2023. While alternative care companies dominated major financing in 2023, 2024 marked the maturation of clinical AI, particularly in clinical decision-making and workflow automation. Later-stage companies that secured funding showcased strong revenue growth, significant market potential, and a clear path to profitability.

Of the 42 Series C or later rounds completed in 2024, 17 were step-up rounds, while 25 were flat or step-down rounds, signaling overall stabilization in valuations.

Slight recovery in \$200M+ rounds

Mega rounds exceeding \$200M dropped from 14 in 2022 to just six in 2023 but showed signs of recovery in 2024, with seven major financings: Devoted, Innovaccer, Caresyntax, HarmonyCares, Prompt, Foodsmart, and Flo Health.

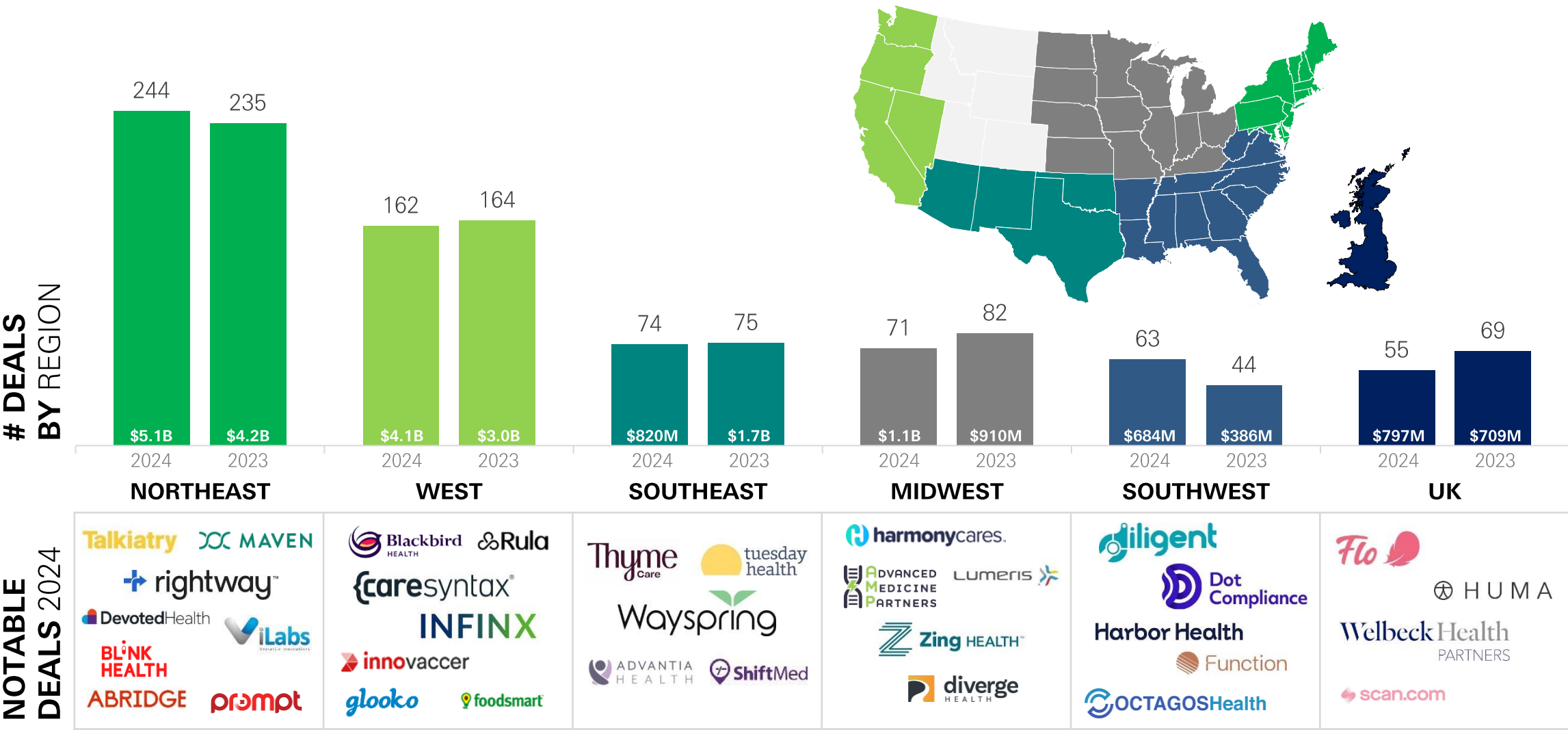
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Healthtech Deal Activity by Region

2023–2024 US & Europe



Northeast continued to lead as Healthtech hotspot



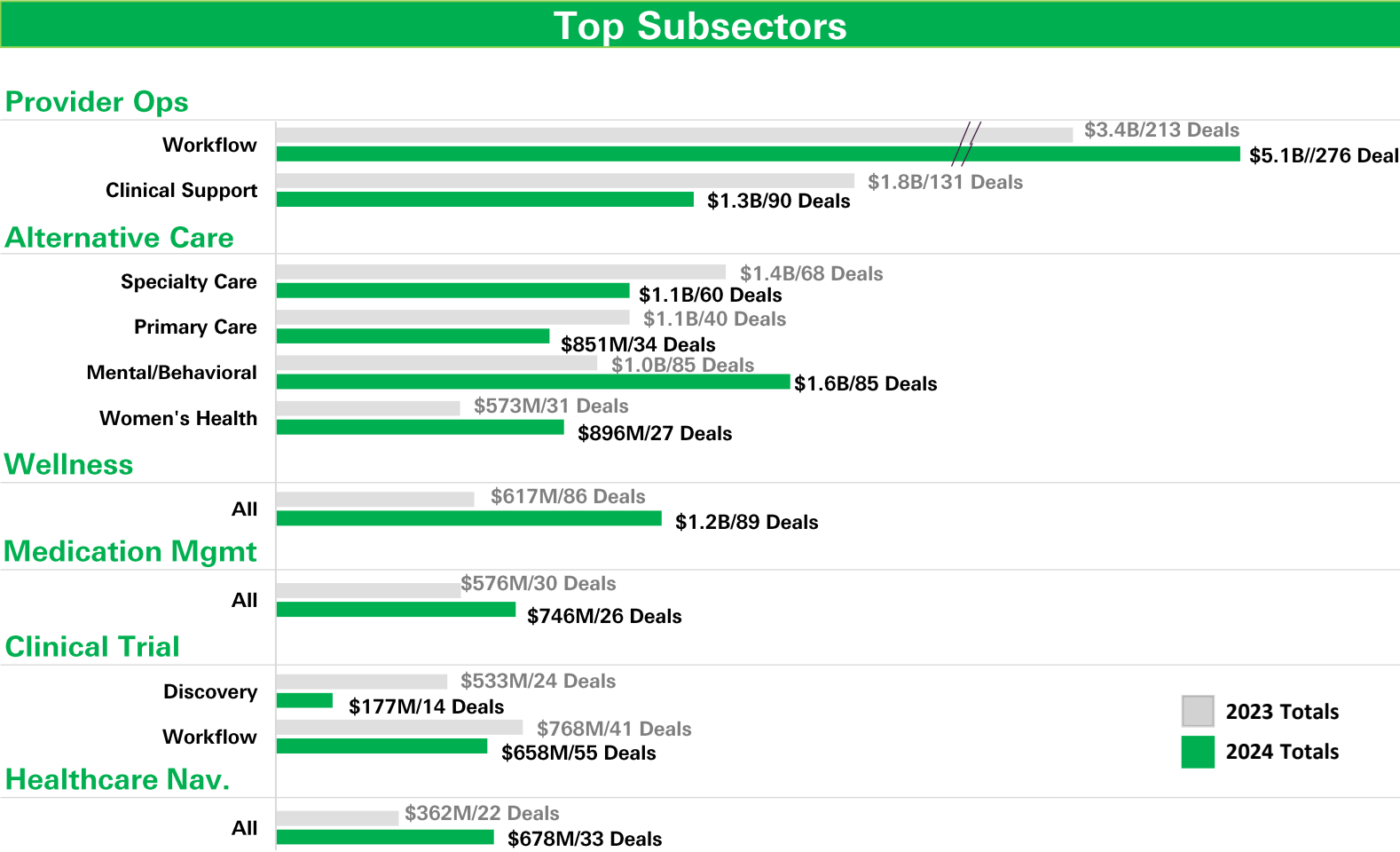
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Healthtech by Subsector

2023–2024 US & Europe



Provider Ops surged; alternative care subsectors a story of contrasts



Workflow solutions drive investment

Similar to 2023, workflow-focused solutions within provider operations attracted the most investment in 2024, highlighted by large deals such as Innovacer (\$250M), Abridge (\$150M), and Glooko (\$124M).

Divergent trends in alternative care investment

While investments in primary and specialty care declined, mental and behavioral health and women's health sectors experienced notable growth in investment dollars, despite stable deal volume. The capital-intensive nature of many alternative care models, compounded by valuation pressures, high burn rates, and challenges in Medicare Advantage (a key focus for many AC companies), created hurdles as companies struggled to meet expectations even after insider or add-on rounds. This contributed to a decline in new financing activity for the subsector. Investors began prioritizing consolidation, focusing on scaling existing models into broader platforms, such as Fabric Health's acquisition of GYANT. M&A activity gained momentum as companies aimed to build scalable, multi-product organizations and improve operational efficiencies, exemplified by Commure's acquisitions of Augmedix and Memora Health.

Women's Health continues to gain momentum

Traditionally dominated by early-stage investments in fertility and pregnancy, the women's health sector has evolved, attracting investors targeting larger opportunities. Comprehensive models addressing maternal care, menstruation, menopause, and mental health have gained significant traction, highlighted by deals such as Maven (\$150M), Flo Health (\$200M), and Midi Health (\$63M).

Health and Wellness shows resilience

The health and wellness sector experienced increased investment activity largely driven by robust interest in diet, nutrition, and wearable health platforms. Notable deals include Foodsmart (\$240M across two rounds), Lore Health (\$80M), and wellness device companies Oura (\$75M) and Levels (\$47M). This growth reflects investor confidence in platforms addressing the consumer-driven demand for personalized health solutions.

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Healthtech Largest Financings

2024 US & Europe



Capital remained available; best-performing companies saw mix of up, flat rounds

| | Subsector | Size of Round/ (\$M) Step-up? ¹ | Date/ Round | Location | | Subsector | Size of Round/ (\$M) Step-up? ¹ | Date/ Round | Location |
|----|--|--|-------------|----------------|----|--|--|-------------|-----------------|
| 1 | caresyntax [®] Provider Ops Clinical Decision Support | 310 | 8/15 C | Larkspur, CA | 11 | Zing HEALTH [™] Healthcare Navigation Provider Matching | 140 | 9/25 C | Chicago, IL |
| 2 | Devoted Provider Ops Workflow | 287 | 8/2 E | Waltham, MA | 12 | VI Provider Ops Workflow | 131 | 1/28 B | New York, NY |
| 3 | innovaccer Provider Ops Workflow | 250 | 4/30 F | SF, CA | 13 | sword Alternative Care Specialty Care | 130 | 6/4 E | Draper, UT |
| 4 | prompt Provider Ops Workflow | 206 | 9/30 B | Paramus, NJ | 14 | Talkiatry Alternative Care Mental Health | 130 | 6/18 C | New York, NY |
| 5 | harmonycares Alternative Care Primary Care | 200 | 4/1 A | Troy, MI | 15 | BLINK HEALTH Medication Mgmt Medication Delivery | 128 | 6/10 D | New York, NY |
| 6 | foodsmart Wellness & Education Health & Wellness | 200 | 7/12 D | SF, CA | 16 | transcarent Healthcare Navigation Provider Matching | 126 | 3/7 D | Denver, CO |
| 7 | Flo Alternative Care Women's Health | 200 | 7/30 C | London, UK | 17 | Rula Alternative Care Mental/Behavioral | 125 | 7/15 C | Los Angeles, CA |
| 8 | ABRIDGE Provider Ops Workflow | 150 | 2/23 C | Pittsburgh, PA | 18 | glooko Provider Ops Workflow | 124 | 10/10 F | Palo Alto, CA |
| 9 | INFINX Provider Ops Workflow | 150 | 5/21 B | Cupertino, CA | 19 | alto ² PHARMACY Medication Mgmt Medication Delivery | 120 | 8/22 F | SF, CA |
| 10 | MAVEN Alternative Care Women's Health | 150 | 8/16 F | New York, NY | 20 | Capital Rx Medication Mgmt Pharmacy Benefits | 115 | 3/21 E | New York, NY |

Valuation¹ ■ Step-Up ■ Flat Rd ■ Step-Down

Numbers at a glance (20 largest deals)

The top 10% of healthtech deals in 2024 raised \$5.3B, accounting for 36% of total investment, the lowest percentage of total investment across all healthcare sectors. Unlike biopharma (45%), dx/tools (48%), and med tech (60%), healthtech displayed less concentration of capital, as more companies raised sizeable, yet not outsize, rounds.

The workflow subsector led with seven of the top 20 deals. Medication Management attracted significant funding, securing three large deals centered on improving patient experience and reducing costs.

Sector

| | |
|------------------------|---------|
| Alternative Care: | 6 deals |
| Provider Ops: | 8 deals |
| Medication Mgmt.: | 3 deals |
| Healthcare Navigation: | 2 deals |
| Wellness/Education: | 1 deals |

Subsector

| | |
|--------------------|---------|
| Workflow: | 7 deals |
| Mental/Behavioral: | 2 deals |
| Women's Health: | 2 deals |

Location

| | |
|---------|---------|
| NorCal: | 6 deals |
| NY: | 5 deals |

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Healthtech Most Active Investors¹

2024 US & Europe



Stratified investor base, with top VCs active in early-stage deals

ALL DEALS

| VC/Angel | | | Corporate | | | Growth ³ | | |
|----------|---|------------------|-----------|--------------------------------|--|---------------------|-------------------------|--|
| 9 | ALLEYCORP | GENERAL CATALYST | 7 | MEMORIAL HERMANN | | 4 | TRANSFORMATION CAPITAL | |
| 8 | andreessen horowitz | | 5 | OPTUM | BLUE VENTURE FUND + SAMSUNG NEXT | 3 | OAK HC/FT +mtip EURAZEO | |
| 6 | Alumni Ventures | | 4 | CVS Health Ventures | UPMC | | | |
| 5 | DEFINE VENTURES LRV HEALTH GREY MATTER VENTURES Healthier Capital FCA VENTURE PARTNERS CITY LIGHT LifeX HDS CAPITAL | | 3 | TMC TEXAS MEDICAL CENTER Merck | McKesson Ventures Cleveland Clinic Catalyst by Wellstar G/ | | | |
| 4 | ALPHA PARTNERS Gaingels wave maker THREE-SIXTY HEALTH kima ventures LiveOak VENTUR | | | | | | | |
| 3 | PLUGANDPLAY B Capital khosla ventures VESALIUS BIOCAPITAL A1 Health First Round First Trust Capital Partners T Ventures | | | | | | | |

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Normalized valuations as Series C+ faced biggest valuation adjustments

| Stage | Deals with Valuations ¹ versus Total Activity | Median Round Size | Up Round ² Percentage | Pre-Money Valuation (by Percentile) in 2024 | |
|-----------------|---|-----------------------|-------------------------------------|--|----------|
| Series B <\$30M | 36 of 50 | \$13M \$20M (2023) | 53% (19/36) 72% (18/25 in 2023) | 25th Pct | \$34M |
| | | | | 50th Pct | \$53M |
| | | | | 75th Pct | \$75M |
| Series B >\$30M | 21 of 43 | \$40M \$41M (2023) | 86% (18/21) 83% (10/12 in 2023) | 25th Pct | \$96M |
| | | | | 50th Pct | \$140M |
| | | | | 75th Pct | \$258M |
| Series C <\$50M | 12 of 16 | \$20M \$32M (2023) | 17% (2/12) 100% (5/5 in 2023) | 25th Pct | \$35M |
| | | | | 50th Pct | \$70M |
| | | | | 75th Pct | \$110M |
| Series C >\$50M | 12 of 22 | \$66M \$73M (2023) | 67% (8/12) 67% (4/6 in 2023) | 25th Pct | \$255M |
| | | | | 50th Pct | \$475M |
| | | | | 75th Pct | \$700M |
| Series D+ | 18 of 29 | \$90M \$75M (2023) | 39% (7/18) 70% (7/10 in 2023) | 25th Pct | \$246M |
| | | | | 50th Pct | \$1,130M |
| | | | | 75th Pct | \$2,915M |

Step-ups declined compared with 2023, but up round share increased

Healthtech’s median step-up multiple held steady at 1.4x in 2024, consistent with 2023. Among 99 Series B and later financings with available valuation data, 54% achieved a step-up.

However, most stages saw a smaller percentage of deals earning up rounds compared with 2023. Smaller Series B deals under \$30M, many of which were insider-led, and Series D or later rounds fared the worst, with more flat and down rounds than up rounds. Most of these companies had aggressive post-money valuations from 2021–2022, making flat or slightly lower valuations a reasonable market correction.

Series C valuations soared, led by alternative care deals

The largest Series C pre-money valuations (for financings > \$50M) were dominated by Alternative Care companies, each exceeding \$1B. Notable examples include Flo Health (\$1.0B pre-money, women’s health), Rula (\$1.1B pre-money, mental health), and Grow Therapy (\$1.3B pre-money, mental health). The 75th percentile for larger Series C deals was \$700M, reflecting high expectations for these companies, which will closely monitor the public market activity of 2025.

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Healthtech Largest Post-Money Values¹

2024 US & Europe



Up rounds and corporate investment drove the highest-valued companies

LARGEST POST-MONEY VALUATIONS BY HEALTHTECH SUBSECTOR

| Subsector | Company | Date | Deal Size (\$M) | Round | Post \$ (\$M)/ Step-up? ² | Subsector Focus | Notable/Lead New Investor(s) |
|--------------------------|---|-------|-----------------|---------|---|--------------------|---------------------------------|
| Provider Ops |  Devoted | 8/2 | \$287 | E | \$13,000 | Workflow | VC, Asset Manager, Corporate |
| Wellness & Education |  OURA | 11/19 | \$75 | D | \$5,000 | Health & Wellness | Corporate |
| Provider Ops |  innovaccer | 4/30 | \$250 | F | \$3,500 | Workflow | Corporate, PE |
| Alternative Care |  spring health | 7/31 | \$100 | E | \$3,300 | Mental Health | Growth |
| Alternative Care |  sword | 6/4 | \$130 | E | \$3,000 | Specialty Care | PE, VC, Asset Manager |
| Alternative Care |  Headway | 7/12 | \$100 | D | \$2,300 | Mental Health | VC, Family Office |
| Provider Ops |  Lumeris | 4/10 | \$100 | unknown | \$2,150 | Workflow | VC, Corporate |
| Healthcare Navigation |  transcarent | 3/6 | \$126 | D | \$2,100 | Provider Matching | VC, Growth, Corporate |

Valuation² Step-Up Flat Rd Step-Down

Stability and growth in later-stage valuations

High-growth, later-stage companies continued to attract significant funding in 2024, with five of the top eight highest-valued private financings achieving up rounds led by new investors. Corporate investors maintained strong engagement for the third consecutive year, a trend likely to persist in 2025.

Key companies in large markets

The highest-valued deals were concentrated in large markets such as insurance, MSK, and mental health, featuring companies that have established themselves as leaders or coleaders. These deals benefited from a broad investor base, including top VCs, growth funds, corporate, and PE.

Big deals at the peak: Where are they now?

A review of the largest and highest-valued deals from the 2021–2022 peak revealed mixed outcomes. Interestingly, of these companies, 56% have since closed undisclosed financings or have not raised funding at all.

| | |
|---------------------------------|-----|
| Closed an up round: | 17% |
| Closed a down round: | 10% |
| Closed a flat round: | 5% |
| IPO (filed or successful): | 7% |
| M&A: | 5% |
| Undisclosed financing/no deals: | 56% |

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Healthcare Outlook: Perspectives for 2025



HSBC Innovation Banking

Healthcare Outlook: A Look Ahead to 2025

GENERAL OVERVIEW

In 2025, first-financing activity is expected to remain muted, except in biopharma, as a weak exit landscape and difficulty securing Series B leads will push VC investments later-stage. Many companies that raised insider rounds from 2023 and 2024 have extended that funding but avoided the expected “rubber-hitting-the-road” moments. Significant consolidation or shutdowns are anticipated in 2025 if these companies fail to secure a new investor-led round. New investment will likely focus on large rounds for top-performing companies, resulting in a flat year for overall healthcare investment. M&A activity is expected to rise modestly across all sectors. The public market may welcome IPOs in 2025, but outside of biopharma, venture-backed IPOs will likely be limited to a few standout companies in each sector.



Biopharma

- **First-financing to favor seasoned teams:** Venture-funded spinoffs and teams from recent big exits with blank checks will dominate, but first financing dollars are likely to decline to \$5.5-\$6B.
- **Investments will remain robust:** Total investment will reach \$24-\$26 billion, driven by strong participation from VC, crossover, and growth investors. Many mezzanine-funded deals from 2021-2023 will face significant refinancing or consolidation pressures due to IPO challenges.
- **M&A activity:** Acquirers will continue targeting both preclinical midsize takeouts and larger, later-stage companies, especially those with IPO optionality. We anticipate \$1B+ private M&A activity to continue.
- **IPO activity rise:** IPOs are likely to total 20 to 25 in 2025, focusing on phase I/II stories.



Med Device

- **First-financing rebound in dollars:** First-financings will exceed \$1B, driven by a few large Series A deals with multiple VC participation to help mitigate Series B risk. Deal volume will remain low.
- **Overall investment steady:** Total investments will reach approximately \$7B, driven by pivotal trial funding and large commercial rounds, supported by diverse capital sources that will help upsize deals.
- **Sector focus:** Neuro, NIM, orthopedic, and uro/gyn will attract more investment, benefiting from growing investor interest in AI applications.
- **IPO and M&A outlook:** Med device IPOs will emerge but are likely to remain in the mid-to-high single digits. M&A activity will remain robust, with increased focus on pre-commercial PMA deals.



Healthtech

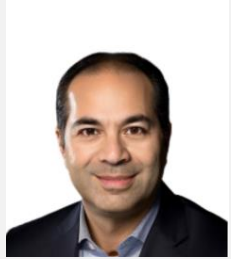
- **Early- to mid-stage normalization:** Continued market normalization is expected for early to mid-stage companies, alongside the growth of AI solutions, particularly in clinical applications. Specialty care sub-sectors like senior care, women's health, and mental health, are poised for further expansion.
- **Market trends in 2025:** 1H 2025 may see slower activity as investors track early IPO performance and adapt to new healthcare deregulatory policies. Activity is expected to accelerate in 2H 2025 as market clarity improves.
- **Consolidation and IPOs:** Later-stage companies will likely pursue consolidation, while early 2025 IPO candidates could pave the way for broader market activity.



Dx/Tools

- **Stable first-financing with AI potential:** First-financing will continue at cycle lows, but AI-enabled deals are expected to see increased momentum.
- **Investment concentration:** Overall investment, driven by large deals, will hold steady at approximately \$7B.
- **Key sectors in focus:** Precision medicine leveraging dx test and analytics, manufacturing for gene and cell therapy, and radiopharma, will continue to attract both early and later-stage investment.
- **IPO and M&A outlook:** A few companies are expected to test the IPO market in early 2025. Additionally, mid-cap acquirers like Natera and Exact Sciences could drive more and larger private M&A deals.

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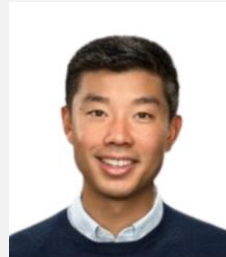
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